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J. Clark Murray

1878

ANNUAL CALENDAR

OF

McGILL COLLEGE

AND

UNIVERSITY

MONTREAL.



FOUNDED UNDER BEQUEST OF THE HON. JAMES McGILL,
ERECTED INTO A UNIVERSITY BY ROYAL CHARTER
IN 1821 ; AND RE-ORGANISED BY AN
AMENDED CHARTER IN 1852.

SESSION OF 1878-9.

Montreal :
PRINTED FOR THE UNIVERSITY BY J. C. BECKET, 658 CRAIG STREET.

1878.

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McGill University, Montreal.

The Forty-sixth Session of this University, being the Twenty sixth under the amended charter, will commence in the Autumn of 1878.

By Virtue of the Royal Charter, granted in 1821 and amended in 1852, the Governors, Principal and Fellows of McGill College, constitute the Corporation of the University ; and, under the statutes framed by the Board of Governors, with approval of the Visitor, have the power of granting Degrees in all the Arts and Faculties, in McGill College, and Colleges affiliated thereto.

The Statutes and Regulations of the University have been framed on the most liberal principles, with the view of affording to all classes of persons the greatest possible facilities for the attainment of mental culture and professional training. In its religious character the University is Protestant, but not denominational ; and while all possible attention will be given to the character and conduct of students, no interference with their peculiar religious views will be sanctioned.

I. McGILL COLLEGE.

THE FACULTY OF ARTS.—The complete course of study for the Degree of B. A. extends over four Sessions, of eight months each : and includes Classics and Mathematics, Experimental Physics, English Literature, Logic, Mental and Moral Science, Natural Science, and one Modern Language, or Hebrew ; all subjects are imperative in the first two years of the Course ; but in the third and fourth years options are allowed in favour of the Honour Courses in Classics, Mathematics, Mental and Moral Science, Natural Science and English Literature. Certain exemptions are also allowed to Professional Students.

THE FACULTY OF APPLIED SCIENCE provides professional instruction in Civil Engineering, Mechanical Engineering, Mining Engineering and Assaying, and Practical Chemistry, leading to the Degree of Bachelor of Applied Science.

THE FACULTY OF MEDICINE.—The complete course of study in Medicine extends over four Sessions, of six months each, and leads to the degree of M. D., C. M.

THE FACULTY OF LAW.—The complete course in Law extends over three Sessions, of six months each, and leads to the degrees of B.C.L. and D. C. L.

II. AFFILIATED COLLEGE.

Students of Affiliated Colleges are matriculated in the University, and may pursue their course of study wholly in the Affiliated College, or in part in McGill College, and may come up to the University Examinations on the same terms with the Students of McGill College.

MORRIN COLLEGE, *Quebec.*—Is affiliated in so far as regards degrees in Arts and Law.

[Detailed information may be obtained from Rev. John Cook, D.D., Principal.]

III. AFFILIATED THEOLOGICAL COLLEGES.

THE CONGREGATIONAL COLLEGE OF BRITISH NORTH AMERICA, *Montreal.*

THE PRESBYTERIAN COLLEGE OF MONTREAL, in connection with the Canada Presbyterian Church.

Affiliated Theological Colleges have the right of obtaining for their Students the advantage, in whole or in part, of the course of study in Arts, with such facilities in regard to exemptions as may be agreed on.

IV. AFFILIATED SCHOOLS.

THE McGILL NORMAL SCHOOL provides the training requisite for Teachers of Elementary and Model Schools and Academies. Teachers trained in this School are entitled to Provincial Diplomas.

THE MODEL SCHOOLS OF THE McGILL NORMAL SCHOOL are Elementary Schools, divided into a Boys' Department, Girls' Department and Primary Schools.

34374

GOVERNING BODY OF THE UNIVERSITY.

VISITOR :—

His Excellency The Right Hon. The Earl of Dufferin, Viscount and Baron Clandeboye, Governor General of Canada, &c.

GOVERNORS :—

[*Being the Members of the Royal Institution for the Advancement of Learning.*]

The Hon. Charles Dewey Day, LL.D., D.C.L., *President & Chancellor of the University,*

The Hon. Jas. Ferrier, Senator, M.L.C.
Andrew Robertson, M.A., Q. C.
The Hon. Christopher Dunkin, M.A., D. C. L.
Peter Redpath, Esq.
George Moffatt, M.A.
John H. R. Molson, Esq.
The Hon. W. Frederick Torrance, M.A., B.C.L.

Charles J. Brydges, Esq.
The Hon. Sir Alexander T. Galt. K. C. M. G.
The Hon. Sir Francis Hincks, K. C. M. G., C. B.
The Hon. Luther H. Holton, M. P.
John Molson, Esq.
Joseph Hickson, Esq.

PRINCIPAL :—

John William Dawson, M.A , LL.D., F.R.S., *Vice-Chancellor.*

FELLOWS :—

Ven. Archdeacon Leach, D.C.L., LL.D., Vice-Principal and Dean of the Faculty of Arts.
Henry Aspinwall Howe, LL.D.
The Hon. J. J. C Abbott, D.C.L. Q. C., Dean of the Faculty of Law.
George W. Campbell, M.A., M D., LL.D., Dean of the Faculty of Medicine.
Rev. John Cook, D.D., Principal of Morrin College, Quebec.
Alexander Johnson, M. A., LL.D., Professor of Mathematics and Natural Philosophy, Vice-Dean of the Faculty of Arts.
Rev. George Cornish, M.A., LL.D., Professor of Classical Literature.
Rev. Henry Wilkes, M.A., D.D., LL.D., Principal and Professor of Theology in the Congregational College of British North America.
Rev. D. H. MacVicar, LL.D., Principal and Professor of Theology in the Presbyterian College of Montreal.
R. A. Ramsay, M A., B.C.L., Representative Fellow in Arts.
John Reddy, M.D., Representative Fellow in Medicine.
William H. Hicks, Esq., Principal of McGill Normal School.
Rev. John Jenkins, D. D., Chairman of the Protestant Board of School Commissioners for the City of Montreal.
J. J. McLaren, M.A., B.C.L., Representative Fellow in Law.
John R. Dougall, M.A., Representative Fellow in Arts.
William H. Kerr, Q.C., D.C L., Acting Dean of the Faculty of Law.
Rev. J. Clarke Murray, LL.D., Professor of Logic.
J. S. C. Wurtele, B.C.L., Associate Professor of Commercial Law.
Henry T. Bovey, M.A., C. E., Professor of Civil Engineering, &c., Dean of the Faculty of Applied Science.
Bernard J. Harrington, B.A., Ph. D., Professor of Assaying and Mining.
Joseph M. Drake, M.D., Emeritus Professor in Medicine.
David R. McCord, M.A., B.C.L., Representative Fellow in Law.
Arthur A. Browne, B.A., M.D., Representative Fellow in Medicine.
C. H. McLeod, Ma.E., Representative Fellow in Applied Science.
John Fraser Torrance, B.A., Ba. App Sci., Representative Fellow in Applied Science.

[*The Governors, Principal and Fellows, constitute, under the Charter, the Corporation of the University.*]

SECRETARY, REGISTRAR AND BURSAR :—

[*And Secretary of the Royal Institution.*]

William Craig Baynes, B. A., Residence and Office, East Wing McGill College, Office hours, 10 to 2.
James W Brakenridge, Clerk, Residence 39 Lorne Avenue.

OFFICERS OF INSTRUCTION.

PROFESSORS:—

JOHN WILLIAM DAWSON, M.A., LL.D., F.R.S.—Principal; Logan Professor of Geology and Professor of Natural History.	East Wing McGill College.
VEN. ARCHDEACON LEACH, D.C.L., LL.D.—Vice Principal, Dean of the Faculty of Arts and Molson Professor of English Literature.	16 University St.
HENRY ASPINWALL HOWE, LL.D.—Emeritus Professor of Mathematics and Natural Philosophy.	405 Sherbrooke Street E.
HON. J. J. C. ABBOTT, D.C.L.—Dean of the Faculty of Law and Professor of Commercial Law.	916 Sherbrooke Street.
GEORGE W. CAMPBELL, M.A., M.D., LL.D.—Dean of the Faculty of Medicine and Emeritus Professor in the Faculty of Medicine.	707 Sherbrooke Street.
WILLIAM E. SCOTT, M.D.—Professor of Anatomy.	43 Beaver Hall Ter.
WILLIAM WRIGHT, M.D.—Professor of Materia Medica and Pharmacy.	34 St. Famille St.
ROBERT P. HOWARD, M.D.—Professor of the Theory and Practice of Medicine.	47 Union Avenue.
REV. A. DE SOLA, LL.D.—Professor of Hebrew and Oriental Literature.	73 McGill Col. Av.
HON. WILLIAM BADGLEY, D.C.L.—Professor of Public and Criminal Law.	64 McGill Col. Av.
R. G. LAFLAMME, D.C.L.—Professor of the Law of Real Estate.	294 Lagauchetiere
CHARLES F. A. MARKGRAF, M.A.—Professor of German Language and Literature.	316 Craig Street.
D. C. MCCALLUM, M.D.—Professor of Midwifery and Diseases of Women and Children.	45 Union Avenue.
ALEXANDER JOHNSON, M.A., LL.D.—Professor of Mathematics and Redpath Professor of Natural Philosophy, Vice-Dean of the Faculty of Arts.	70 McGill Col. Av.
REV. GEORGE CORNISH, M.A., LL.D.—Professor of Classical Literature.	149 Metcalf Street
PIERRE J. DAREY, M.A., B.C.L.—Professor of French Language and Literature.	39 McGill College Avenue.
ROBERT CRAIK, M.D —Professor of Chemistry.	2 Phillips Square.
EDWARD CARTER, Q.C., D.C.L.—Associate Professor of Criminal Law.	31 Cadieux Street.
G. E. FENWICK, M.D.—Professor of Surgery.	24 Beaver Hall Ter.
JOSEPH M. DRAKE, M.D.—Emeritus Professor in Faculty of Medicine.	19 Beaver Hall Ter.
N. W. TRENHOLME, M.A., B.C.L.—Professor of Roman Law.	98 University St.
J. S. C. WURTELE, B.C.L.—Associate Professor of Commercial Law.	416 St. Antoine St.
WILLIAM H. KERR, D.C.L.—Professor of International Law. Acting Dean of the Faculty of Law.	387 Sherbrooke St.
GONZALVE DOUTRE, D.C.L.—Professor of Civil Procedure.	37 MacKay Street.
GILBERT P. GIRDWOOD, M.D.—Professor of Practical Chemistry.	28 Beaver Hall Ter.
REV. J. CLARKE MURRAY, LL.D.—Professor of Logic and John Frothingham Professor of Mental and Moral Philosophy.	11 Lincoln Avenue
HON. H. F. RAINVILLE, LL.B. [Laval]—Associate Professor of Real Estate Law.	36 St. Denis St.
GEORGE ROSS, M.A., M.D.—Professor of Clinical Medicine.	48 Union Avenue.
BERNARD J. HARRINGTON, B.A., Ph. D.—Professor of Assaying and Mining, and Lecturer on Chemistry.	Wallbrae Pl., University Street.
THOMAS G. RODDICK, M.D.—Professor of Clinical Surgery.	44 Beaver Hall Ter.
WILLIAM OSLER, M.D.—Professor of Institutes of Medicine.	1351 St. Catherine Street.
ROBERT T. GODFREY, M.D.—Professor of Hygiene and Public Health.	1360 St. Catherine Street.
WILLIAM GARDNER, M.D.—Professor of Medical Jurisprudence	525 St. Joseph St.
HENRY T. BOVEY, M.A., A.I.C.E. [Eng], Fellow of Queen's College, Cambridge, Professor of Civil Engineering and Applied Mechanics. Dean of the Faculty of Applied Science.	96 University St.

LECTURERS:—

JOHN S. ARCHIBALD, B.A., B.C.L.—Lecturer in Criminal and Constitutional Law.	126 St. Francois Xavier Street.
C. H. MCLEOD, Ba. App. Sic., Lecturer in Geometrical Drawing and Superintendent of Meteorological Observatory.	69 Mansfield St.
CHRISTOPHER A. GEOFFRION, B.C.L.—Lecturer in Roman Law.	184 St. Denis St.
EDMOND LAREAU, B.C.L.—Lecturer in Legal History.	293 Notre-Dame
FRANCIS J. SHEPHERD, M.D —Demonstrator of Anatomy.	41 Beaver Hall Ter.
MATTHEW HUTCHINSON, B.C.L.—Lecturer in Civil Procedure.	42 Coursol Street.
J. EMERY ROBIDEAU, B.C.L.—Lecturer in Real Estate Law.	89 St Christophe.
FRANK BULLER, M.D.—Lecturer on Diseases of the Eye and Ear.	1351 St. Catherine
GEORGE H. CHANDLER, B.A. — Lecturer in Mathematics, Faculty of Applied Science.	23 Hanover St.

JOHN ANDREW, Instructor in Elocution.	64 Roy Street.
FREDERICK BARNJUM, Instructor in Gymnastics.	32 Burnside Place

ERRATA.

Page 143, for last three lines of paragraph fifth, read ;
" taking at least half the Marks in Arithmetic, Geometry and Algebra ; and have passed in Trigonometry and in one Natural Science subject, (or in two Modern Languages) shall be entitled to Senior certificates."

Page 146, after "*John Bissett Rose,*" Geometry, History, English Literature and Geography should have asterisks.

BENEFACTORS OF

McGill University, Montreal.

I. ORIGINAL ENDOWMENT, 1811.

THE HONOURABLE JAMES McGILL, who was born at Glasgow, 6th Oct., 1744, and died at Montreal, 19th Dec., 1813, by his last will and Testament, under date 8th January, 1811, devised the Estate of Burnside, situated near the City of Montreal, and containing forty-seven acres of land, with the Manor House and Buildings thereon erected, and also bequeathed the sum of ten thousand pounds in money, unto the "Royal Institution for the advancement of Learning," a Corporation constituted in virtue of an Act of Parliament passed in the Forty-first Year of the Reign of his Majesty, King George the Third, to erect and establish a University or College for the purpose of Education and the advancement of learning in the Province of Lower Canada, with a competent number of Professors and Teachers to render such Establishment effectual and beneficial for the purposes intended, requiring that one of the Colleges to be comprised in the said University, should be named and perpetually be known and distinguished by the appellation of "McGill College."

The value of the above mentioned property was estimated at the date of the bequest at - - - - - - - - - $120,000,

II. WILLIAM MOLSON HALL.

In 1861, the "William Molson Hall," being the west wing of the McGill College buildings, with the Museum Rooms, and the Chemical Laboratory and Class Rooms, was erected through the munificent donation of the founder whose name it bears.

III. ENDOWED CHAIRS.

THE MOLSON CHAIR OF ENGLISH LANGUAGE AND LITERATURE, in 1856, by the Honourable John Molson, Thomas Molson, Esq., and William Molson, Esq.,—$20,000.

THE PETER REDPATH CHAIR OF NATURAL PHILOSOPHY, in 1871, by Peter Redpath, Esq.—$20,000.

THE LOGAN CHAIR OF GEOLOGY, in 1871, by Sir W. E. Logan, LL.D., F.R.S., and Hart Logan, Esq.—$20,000.

THE JOHN FROTHINGHAM CHAIR OF MENTAL AND MORAL PHILOSOPHY, in 1873, by Miss Louisa Frothingham.—$20,000.

IV. EXHIBITIONS AND SCHOLARSHIPS IN ARTS.

THE JANE REDPATH EXHIBITION, $100 annually,—founded in 1868 by Mrs. Redpath of Terrace Bank, Montreal, and endowed with the sum of $1,667.

THE GOVERNOR'S SCHOLARSHIP of $100 annually,—founded by subscription of members of the Board of Governors in 1869.

THE McDONALD SCHOLARSHIPS AND EXHIBITIONS, 10 in number—founded in 1871, by William C. McDonald, Esq.—Annual value, $1,250.

THE CHARLES ALEXANDER SCHOLARSHIP, for Classics,—founded in 1871, by Charles Alexander, Esq.—Annual value, $120.

THE TAYLOR SCHOLARSHIP,—founded in 1871, by T. M. Taylor, Esq. Annual value, $100 :—terminated in 1878.

THE SCOTT EXHIBITION,—founded by the Caledonian Society of Montreal in commemoration of the Centenary of Sir Walter Scott, and endowed in 1872 with the sum of $1100 subscribed by members of the Society, and other citizens of Montreal. The Exhibition is given annually in the Department of Practical and Applied Science.

V. ENDOWMENTS OF MEDALS AND PRIZES.

In 1856 Henry Chapman, Esq., founded a gold medal to be named the "Henry Chapman Gold Medal," to be given annually in the graduating class in Arts. This Medal was endowed by Mr. Chapman in 1874 with the sum of $700.

In 1860 the sum of £200 presented to the College by H. R. H. the Prince of Wales was applied to the foundation of a Gold Medal, to be called the "Prince of Wales Gold Medal," which is given in the graduating class for Honour Studies in Mental and Moral Philosophy.

In 1864 the "Anne Molson Gold Medal," was founded and endowed by Mrs. John Molson of Belmont Hall, Montreal, for an Honour Course in Mathematics and Physical Science.

In the same year the "Shakespeare Gold Medal," for an Honour Course to comprise and include to works of Shakespeare and the Literature of England from his time to the time of Addison, both inclusive, and such other accessary subjects as the Corporation may from time to time appoint,—was founded and endowed by citizens of Montreal, on occasion of the three hundredth anniversary of the birth of Shakespeare.

In the same year the "Logan Gold Medal," for an Honour Course in Geology and Natural Science, was founded and endowed by Sir William Edmund Logan LL.D., F.R.S., F.G.S., &c.

In 1865 the "Elizabeth Torrance Gold Medal," was founded and endowed by John Torrance, Esq., of St. Antoine Hall, Montreal, in memory of the late Mrs. John Torrance, for the best student in the graduating class in law, and more especially for the highest proficiency in Roman Law.

In the same year, the "Holmes Gold Medal," was founded by the Medical Faculty, as a memorial of the late Andrew Holmes, Esq., M.D, LL.D., late Dean of the Faculty of Medicine, to be given to the best student in the graduating class in Medicine, who shall undergo a special examination in all the branches, whether Primary or final.

In 1874 a Gold and a Silver Medal were given by His Excellency the Earl of Dufferin, Governor General of Canada, for competition in the Faculty of Arts and continued till 1878.

In 1878 the "Sutherland Gold Medal," was founded by Mrs. Sutherland of Montreal, in memory of her late husband Prof. William Sutherland, M.D., for competition in the classes of Theoretical and Practical Chemistry in the Faculty of Medicine, together with creditable standing in the Primary Examinations.

In 1875 "the Neil Stewart prize of $20 in Hebrew was endowed by Neil Stewart, Esq., of Vankleek Hill in the sum of $340.

VI. SUBSCRIPTIONS TO THE GENERAL ENDOWMENT

1856.

John Gordon McKenzie, Esq.	$2000	Honourable Sir John Rose	$600
Ira Gould, Esq.	2000	Charles Alexander, Esq.	600
John Frothingham, Esq.	2000	Moses E. David, Esq.	600
John Torrance, Esq.	2000	Wm. Carter, Esq.	600
James B. Greenshields, Esq.	1200	Thomas Paton, Esq.	600
William Busby Lambe, Esq.	1200	Wm. Workman, Esq.	600
Sir George Simpson, Knight.	1000	Honourable Sir A. T. Galt.	600
Henry Thomas, Esq.	1000	Honourable Luther H. Holton	600
John Redpath, Esq.	1000	Henry Lyman, Esq.	600
James McDougall, Esq.	1000	David Torrance, Esq.	600
James Torrance, Esq.	1000	Edwin Atwater, Esq.	600
Honourable James Ferrier.	1000	Theodore Hart, Esq.	600
John Smith, Esq.	1000	William Forsyth Grant, Esq.	600
Harrison Stephens, Esq.	1000	Robert Campbell, Esq.	600
James Mitchell, Esq.	1000	Alfred Savage, Esq.	600
Henry Chapman, Esq.	600	James Ferrier, Jr., Esq.	600
Honourable Peter McGill	600	William Stephens, Esq.	600
John James Day, Esq.	600	N. S. Whitney, Esq.	600
Thomas Brown Anderson, Esq.	600	William Dow, Esq.	600
Peter Redpath, Esq.	600	William Watson, Esq.	600
Thomas M. Taylor, Esq.	600	Edward Major, Esq.	600
Joseph McKay, Esq.	600	Honourable Charles Dewey Day	200
Donald Lorn McDougall, Esq.	600	John R. Esdaile, Esq.	200

1871

William Molson, Esq.	$5000	T. W. Ritchie, Esq.	$600
William C. McDonald, Esq.	5000	A. & W. Robertson, Esqs.	600
Thomas Workman, Esq	5000	Messrs. Sinclair, Jack & Co.	250
John Frothingham, Esq.	5000	John Reddy, Esq., M.D.	100
J. H. R. Molson, Esq.	2000	Wm. Lunn, Esq.	100
John McLennan, Esq.	1000	Kenneth Campbell, Esq.	100
B. Gibb, Esq.	600	R. A. Ramsay, Esq.	100
W. Notman, Esq.	600	William Rose, Esq.	50

VII. ENDOWMENT FOR DEPARTMENT OF PRACTICAL SCIENCE.

1871

Daniel Torrance, Esq.,	$5000
George Moffatt, Esq.	1000
Charles J. Brydges, Esq.	1000
Robert J. Reekie, Esq.	1000
Hon. James Ferrier, (per annum for 7 years)	100
Donald Ross, Esq., (per annum for 5 years	50
Peter Redpath, Esq. (do)	400
John H. R. Molson, Esq. (do)	400

1878

P. Redpath, Esq., (per annum for 5 years)	400
H. McLennan, Esq,, (per annum for 5 years)	100
A. F. Gault, Esq., (do) (do)	100
Hon. James Ferrier, (do)	100
T. James Claxton, Esq. do	100
Mrs. Redpath, (Terrace Bank)	100
Gilbert Scott, Esq,	100

VIII. SUBSCRIPTIONS FOR SPECIAL OBJECTS.

Subscriptions for the purchase of Philosophical Apparatus, 1867.

William Molson, Esq.,	$500	John Frothingham, Esq.,	$100
John H. R. Molson, Esq.	500	David Torrance, Esq.,	100
Peter Redpath, Esq.,	500		
George Moffatt, Esq.,	250		$2050
Andrew Robertson, Esq.,	100		

Subscriptions for the erectionof a fire-proof Building for the Carpenter Collection of Shells, 1868.

Peter Redpath, Esq.,	$500	Wm. Dow, Esq.,	$100
William Molson, Esq.,	500	Thomas Rimmer, Esq.,	100
Harrison Stephens, Esq.,	100	Andrew Robertson, Esq.,	100
Robert J. Reekie, Esq.,	100	Mrs. Redpath,	100
John H. R. Molson, Esq.,	100	Benaiah Gibb, Esq.,	50
Sir William E. Logan, F.R.S.	100	Honourable John Rose,	50
John Molson, Esq.,	100		
Thos. Workman, Esq., M.P.	100		$2,180
Geo. H. Frothingham, Esq.,	100		

Subscriptions for the Erection of the Lodge and Gates.

William Molson, Esq.,	$100	James A. Mathewson, Esq.,	$100
John H. R. Molson, Esq.,	100	Peter Redpath, Esq.,	100
William Workman, Esq.,	100	G. H. Frothingham, Esq.,	100
Joseph Tiffin, Jr., Esq.,	100	G. D. Ferrier, Esq.,	100
Thos. J. Claxton, Esq.,	100	Geo. W. Warner, Esq.,	100
James Linton, Esq.,	100	John Smith, Esq.,	100
William McDougall, Esq.,	100	Charles Alexander, Esq.,	100
Charles J. Brydges, Esq.,	100	J. Evans, Esq.,	100
George Drummond, Esq.,	100	Henry Lyman, Esq.,	100
Thomas Rimmer, Esq.,	100		
William Dow, Esq.,	100		$2,100
John Frothingham, Esq.,	100		

Subscriptions for the internal fittings of the Library and Museum of the Faculty of Medicine, 1872.

G. W. Campbell, A.M., M.D.,	$1200	Robert Craik, M.D.,	$200
Wm. E. Scott, M.D.,	200	Geo. E. Fenwick, M.D.,	200
Wm. Wright, M.D.,	200	Joseph M. Drake, M.D.,	200
Robert P. Howard, M.D.,	200	George Ross, M.A., M.D.,	50
Duncan C. McCallum, M.D.,	200		

Library and Museum Funds and Subscriptions.

Mrs. G. H. Frothingham, for the arrangement of Dr. Carpenter's Collection of Mazatlan Shells	$233	Wm. Molson, Esq., for Library Fund.	$4000
T. J. Claxton, Esq., £50 sterling for additions to the Museum.	$250	Wm. Molson, Esq., for Museum Fund.	$2000
		Hon. F. W. Torrance, Mental and Moral Philosophy Book Fund.	$1000
		John Thorburn, M.A., for the Library.	$90

A Lady, for the purchase of Mining Models..... $1000
Thos. McDougall, Esq., for the same..... $35
J. Livesey, Esq., through Dr. Harrington, for the same..... 50

Miscellaneous.

Hon. C. Dunkin, M.P., in aid of the chair of Practical Chemistry. . . . $1,200
Principal Dawson, in aid of the same. . . . $1,200
P. Redpath, Esq. do do $266

T. M. Thompson, Esq., $250 for two Exhibitions in September, 1871, $200 for two exhibitions in 1872. . . $450
Rev. Colin C. Stewart, for the "Stewart Prize in Hebrew." $60
Terminated in 1875.

R. A. Ramsay, M.A., B.C.L., to defray the expenses of re-erecting the tomb of the late Hon. James McGill..... 150 00

XI. ENDOWMENT, HELD IN TRUST BY THE BOARD OF ROYAL INSTITUTION.

The "Hannath Willard Lyman Memorial Fund" contributed by subscription of former pupils of Miss Lyman, and invested as a permanent Endowment, to furnish annually a Scholarship or Prize in a College for Women affiliated to the University; or in Classes for the Higher Education of Women approved by the University. The amount of the fund is at present $1100.

XII. SPECIAL COLLECTIONS OF BOOKS PRESENTED TO THE LIBRARY.

1. The Peter Redpath Collection of Historical Books—presented by Peter Redpath, Esq., of Montreal, 1483 Volumes.
2. The Robson Collection of works in Archaeology and general Literature. Presented by Dr. John Robinson of Warrington, England, 3436 Volumes.
3. The Charles Alexander Collection of Classical Works, presented by C. Alexander, Esq., of Montreal, 221 Volumes.
4. Frederick Griffin, Esq., Q.C., Collection of Books, being the whole of his Library, bequeathed by his will, 2692 Volumes.

XIII. SPECIAL COLLECTIONS PRESENTED TO THE MUSEUM.

1. The Holmes Herbarium—presented by the late Andrew F. Holmes, M. D.,
2. The Carpenter Collection of Shells–presented by the late P. P. Carpenter, Ph. D.
3. The Collection of Casts of Ivory Carvings issued by the Arundel Society—Presented by Henry Chapman, Esq.

(See also "List of Donations to the Library and Museum," printed annually in the calendar.)

XIV. LIST OF SUBSCRIPTIONS TO THE FUND OF THE GRADUATES' SOCIETY, FOR ENDOWMENT OF THE LIBRARY.

The Graduates' Society of the University, in 1876, passed the following Resolution :—

"*Resolved* :—"That the members and graduates be invited to subscribe to "a fund for the endowment of the Libraries of the University; said fund to be

" invested and the proceeds applied under the supervision of the Council of the " Society in annual additions to the Libraries ; an equitable division of said " proceeds to be made by the Council between the University Library and those " of the Professional Faculties."

In terms thereof, the following subscriptions have been announced to date, (May 1, 1878).

(*alphabetically arranged*).

O. H. Baynes, B.C.L.,	$ 50	In 2 Annual Instalments.
M. B. Bethune, M.A., B.CI.,	50	Cash. "
A. A. Browne, B.A., M.D.	50	In 5 "
J. D. Cline, B.A., M.D.,	75	In 3 "
Lemuel Cushing, M.A.., B.C.L.,	100	In 4 "
J. R. Dougall, M. A.,	50	In 5 "
R. W. Ells, M. A.,	50	In 5 "
Rev. J. Empson, B.A.,	25	Cash.
Wm. Gardner, M.D.	100	In 4 "
Charles Gibb, B.A.,	50	In 2 "
F. E. Gilman, LL.D., B.C.L.,	100	Cash.
J. S. Hall, B.A., B.C.L.,	50	In 2 "
Rev. W. Hall, M.A.	10	Cash.
B. J. Harrington, B.A., Ph. D.	50	In 2 "
F. W. Hicks, M.A.	50	In 2 "
Edward Holton, B.C.L.,	100	Cash.
M. Hutchinson, B.C.L.	5	Cash. "
Geo. E. H. Jenkins, B.C.L.	5	Cash. "
F. J. Keller, B.C.L.	100	In 4 "
F. W. Kelley, M.A. Ph. D.,	100	In 4 "
Rev. R. Laing, M.A.	100	In 4 "
F. S. Lyman, B.A., B.C.L.,	50	In 2 "
Wm. Molson, M.D.,	100	In 5 "
Fred. MacKenzie, B.C.,	100	Cash.
J. J. MacLaren, B.C.L.,	100	In 4 "
D. MacMaster, B.C.L ,	100	In 4 "
D. R. McCord, M.A., B.C.L.,	100	In 4 "
C. H. MacLeod, Ma. E,	50	In 5 "
Wm. Osler, M. D.,	100	In 4 "
R. A. Ramsay, M.A., B.C.L.,	100	Cash.
Alex. Robertson, B. A.,	100	In 4 "
S. P. Robins, M.A.,	50	Cash.
T. G. Roddick, M.D.,	100	In 5 "
George Ross, M.A., M.D.,	100	In 4 "
F. J. Shepherd, M.D.,	100	In 5 "
J. F. Torrance, B.A., Ba., App. Sec.,	100	In 5 "
N. W. Trenholme, M.A., B.C.L.,	100	In 4 "
D. F. H. Wilkins, Ba. App. Sc.,	5	Cash.
Total to date	$2,715	

ACADEMICAL YEAR 1878-9.

SEPTEMBER, 1878.

1	SUNDAY	
2	Monday	Normal School opens.
3	Tuesday	
4	Wednesday	Meeting of Normal School Committee.
5	Thursday	
6	Friday	
7	Saturday	
8	SUNDAY	
9	Monday	
10	Tuesday	
11	Wednesday	
12	Thursday	
13	Friday	
14	Saturday	Meeting of Faculty of Law.
15	SUNDAY	
16	Monday	Meetings Fac. Arts and App. Science.
17	Tuesday	Mat. and Supp. Exn's in Classics. Exhibition and Scholarship Examinations.
18	Wednesday	Mat. and Supp. Ex'ns in Mathematics. Exhibition and Scholarship Ex'ns.
19	Thursday	Mat. and Supp. Ex'ns in English, Logic, Men. & Mor. Phil. Exhib. & Schol. Ex.
20	Friday	Mat. and Supp. Ex'ns in Modern Languages & Natural Science. Exhi. and Schol. Ex.
21	Saturday	Meeting of Governors.
22	SUNDAY	
23	Monday	Meeting of Faculty of Arts. Lectures in Arts and Applied Science begin.
24	Tuesday	
25	Wednesday	
26	Thursday	
27	Friday	
28	Saturday	
29	SUND.	
30	Monday	

OCTOBER, 1878.

1	Tuesday	Session of Law and Med. Facs. begins.
2	Wednesday	Meeting of Normal School Committee.
3	Thursday	
4	Friday	
5	Saturday	Matriculation Examination in Medicine. Meeting of Faculty of Law.
6	SUNDAY	Founder's Birthday.
7	Monday	Meeting of Faculty of Arts.
8	Tuesday	The William Molson Hall opened 1862.
9	Wednesday	
10	Thursday	
11	Friday	
12	Saturday	
13	SUNDAY	
14	Monday	Meeting of Faculty of Applied Science.
15	Tuesday	
16	Wednesday	
17	Thursday	
18	Friday	
19	Saturday	
20	SUNDAY	
21	Monday	Meeting of Faculty of Arts.
22	Tuesday	
23	Wednesday	Regular Meeting of Corporation. School Examiners appointed. Reports on Scholarships and Exhibitions. Accounts audited.
24	Thursday	
25	Friday	
26	Saturday	Meeting of Governors.
27	SUNDAY	
28	Monday	
29	Tuesday	
30	Wednesday	
31	Thursday	

NOVEMBER, 1878

1	Friday	
2	Saturday	Meeting of Faculty of Law.
3	SUNDAY	
4	Monday	Meeting of Faculty of Arts.
5	Tuesday	
6	Wednesday	Meeting of Normal School Committee.
7	Thursday	Annual University Lecture.
8	Friday	
9	Saturday	
10	SUNDAY	
11	Monday	Meeting of Faculty of Applied Science.
12	Tuesday	
13	Wednesday	
14	Thursday	
15	Friday	
16	Saturday	
17	SUNDAY	
18	Monday	Meeting of Faculty of Arts.
19	Tuesday	
20	Wednesday	
21	Thursday	
22	Friday	
23	Saturday	Meeting of Governors.
24	SUNDAY	
25	Monday	
26	Tuesday	
27	Wednesday	
28	Thursday	
29	Friday	
30	Saturday	

DECEMBER, 1878.

1	SUNDAY	
2	Monday	Meeting of Faculty of Arts.
3	Tuesday	
4	Wednesday	Meeting of Normal School Committee.
5	Thursday	
6	Friday	Lectures in Arts terminate.
7	Saturday	Meeting of Faculty of Law.
8	SUNDAY	
9	Monday	Meeting of Faculty of Applied Science.
10	Tuesday	Christmas Examinations commence.
11	Wednesday	
12	Thursday	
13	Friday	
14	Saturday	
15	SUNDAY	
16	Monday	
17	Tuesday	
18	Wednesday	
19	Thursday	
20	Friday	
21	Saturday	Christmas Vacation commences.
22	SUNDAY	
23	Monday	
24	Tuesday	
25	Wednesday	Christmas-Day.
26	Thursday	
27	Friday	
28	Saturday	Meeting of Governors.
29	SUNDAY	
30	Monday	
31	Tuesday	

JANUARY, 1879.

1	Wednesday	
2	Thursday	
3	Friday	
4	Saturday	Meeting of Faculty of Law.
5	SUNDAY	Christmas Vacation ends.
6	Monday	Meeting Fac. Arts. Lec. in Arts, Law, Med. and App. Science re-commence.
7	Tuesday	
8	Wednesday	Meeting of Normal School Committee.
9	Thursday	
10	Friday	
11	Saturday	
12	SUNDAY	
13	Monday	Meeting of Faculty of Arts.
14	Tuesday	
15	Wednesday	
16	Thursday	
17	Friday	
18	Saturday	
19	SUNDAY	
20	Monday	Meeting of Faculty of Applied Science.
21	Tuesday	
22	Wednesday	Regular Meeting of Corporation. Examiners appointed. Annual Report to Visitor.
23	Thursday	
24	Friday	
25	Saturday	Meeting of Governors.
26	SUNDAY	
27	Monday	Meeting of Faculty of Arts.
28	Tuesday	
29	Wednesday	
30	Thursday	
31	Friday	

FEBRUARY, 1879.

1	Saturday	Meeting of Faculty of Law. Theses for Degree of D.C.L. to be sent in to Dean of Faculty of Law.
2	SUNDAY	
3	Monday	Meeting of Faculty of Applied Science.
4	Tuesday	
5	Wednesday	Meeting of Normal School Committee.
6	Thursday	Meeting of Examiners.
7	Friday	
8	Saturday	
9	SUNDAY	
10	Monday	Meeting of Faculty of Arts.
11	Tuesday	
12	Wednesday	
13	Thursday	
14	Friday	
15	Saturday	
16	SUNDAY	
17	Monday	
18	Tuesday	
19	Wednesday	
20	Thursday	
21	Friday	Supplemental Examinations.
22	Saturday	Meeting of Governors.
23	SUNDAY	
24	Monday	Meeting of Faculty of Arts.
25	Tuesday	
26	Wednesday	No Lectures.
27	Thursday	
28	Friday	

MARCH, 1879.

1	Saturday	Meeting of Faculty of Law. Theses for Degrees of M.D. and B.C.L. to be sent in to Deans of Faculties.
2	SUNDAY	
3	Monday	Meeting of Faculty of Applied Science.
4	Tuesday	
5	Wednesday	Meeting of Normal School Committee.
6	Thursday	Examinations in Law.
7	Friday	Examinations in Law.
8	Saturday	
9	SUNDAY	
10	Monday	Meeting of Fac. Arts. Exam's. in Law.
11	Tuesday	Examinations in Law.
12	Wednesday	Examinations in Law.
13	Thursday	Examinations in Law.
14	Friday	Examinations in Law.
15	Saturday	Exams. in Botany, Med. Faculty.
16	SUNDAY	
17	Monday	
18	Tuesday	
19	Wednesday	Lectures in Medicine terminate.
20	Thursday	Primary Examination in Medicine.
21	Friday	Final Examination in Medicine.
22	Saturday	Meeting of Governors.
23	SUNDAY	
24	Monday	Meeting of Fac. of Arts. Reports of Attendance on Lectures. Final Examinations for Degree in Medicine.
25	Tuesday	
26	Wednesday	
27	Thursday	Lectures in Arts terminate.
28	Friday	
29	Saturday	
30	SUNDAY	
31	Monday	Meeting of Convocation for Degrees in Law and Medicine. B.A. Honour Examinations commence.

APRIL, 1879.

1	Tuesday	Ordinary Examinations in Arts and Applied Science commence.
2	Wednesday	
3	Thursday	
4	Friday	
5	Saturday	Theses for the Degree of M.A. to be sent in to the Dean.
6	SUNDAY	
7	Monday	
8	Tuesday	Meeting of Faculty of Arts.
9	Wednesday	
10	Thursday	
11	Friday	Good Friday. Easter Vacation begins.
12	Saturday	
13	SUNDAY	Easter-Day.
14	Monday	
15	Tuesday	
16	Wednesday	
17	Thursday	
18	Friday	
19	Saturday	
20	SUNDAY	
21	Monday	
22	Tuesday	
23	Wednesday	Regular Meeting of Corporation. Meeting of Fac. of Arts. Meeting of Exam.
24	Thursday	
25	Friday	
26	Saturday	Meeting of Governors.
27	SUNDAY	
28	Monday	Meeting of Examiners. Declaration of Results of Examinations.
29	Tuesday	
30	Wednesday	Meeting of Convocation for Degrees in Arts and Applied Science.

MAY, 1879.

1	Thursday	
2	Friday	
3	Saturday	
4	SUNDAY	
5	Monday	
6	Tuesday	
7	Wednesday	Normal School Committee.
8	Thursday	
9	Friday	
10	Saturday	
11	SUNDAY	
12	Monday	
13	Tuesday	
14	Wednesday	
15	Thursday	
16	Friday	
17	Saturday	
18	SUNDAY	
19	Monday	Examinations for Certificate of Association in Arts begin.
20	Tuesday	
21	Wednesday	
22	Thursday	
23	Friday	
24	Saturday	Queen's Birth-Day.
25	SUNDAY	
26	Monday	
27	Tuesday	
28	Wednesday	
29	Thursday	
30	Friday	
31	Saturday	Meeting of Governors.

JUNE, 1879.

1	SUNDAY	Whit-Sunday.
2	Monday	Exams. in Normal School commence.
3	Tuesday	
4	Wednesday	Normal School Committee.
5	Thursday	
6	Friday	
7	Saturday	
8	SUNDAY	
9	Monday	
10	Tuesday	
11	Wednesday	
12	Thursday	
13	Friday	
14	Saturday	
15	SUNDAY	
16	Monday	
17	Tuesday	
18	Wednesday	
19	Thursday	
20	Friday	
21	Saturday	
22	SUNDAY	
23	Monday	
24	Tuesday	
25	Wednesday	Regular Meeting of Corporation. Report of Normal School.
26	Thursday	Normal School closes for Summer Vacation.
27	Friday	
28	Saturday	Meeting of Governors.
29	SUNDAY	
30	Monday	

JULY, 1879.

1	Tuesday	
2	Wednesday	
3	Thursday	
4	Friday	
5	Saturday	
6	SUNDAY	
7	Monday	
8	Tuesday	
9	Wednesday	
10	Thursday	
11	Friday	
12	Saturday	
13	SUNDAY	
14	Monday	
15	Tuesday	
16	Wednesday	
17	Thursday	
18	Friday	
19	Saturday	
20	SUNDAY	
21	Monday	
22	Tuesday	
23	Wednesday	
24	Thursday	
25	Friday	
26	Saturday	
27	SUNDAY	
28	Monday	
29	Tuesday	
30	Wednesday	
31	Thursday	

AUGUST, 1879.

1	Friday	
2	Saturday	
3	SUNDAY	
4	Monday	
5	Tuesday	
6	Wednesday	
7	Thursday	
8	Friday	
9	Saturday	
10	SUNDAY	
11	Monday	
12	Tuesday	
13	Wednesday	
14	Thursday	
15	Friday	
16	Saturday	
17	SUNDAY	
18	Monday	
19	Tuesday	
20	Wednesday	
21	Thursday	
22	Friday	
23	Saturday	
24	SUNDAY	
25	Monday	
26	Tuesday	
27	Wednesday	
28	Thursday	
29	Friday	
30	Saturday	
31	SUN	

Examination Days.—1878-9.

CHRISTMAS EXAMINATIONS, 1878.

Dec.	DAYS.	FIRST YEAR.	SECOND YEAR.	THIRD YEAR.	FOURTH YEAR.
10	Tues.	Classics.	Classics.	Math. Physics.	Math. Physics.
11	Wed.	Classics.	Classics.	Exp. Physics.	Exp. Physics.
12	Thu.		Botany.	English.	Metaphysics.
13	Fri.	Mathematics.	Logic.	Zoology.	
16	Mon.	English.	French.	Classics.	English.
18	Wed.	Chemistry.	Mathematics.	Classics.	Geology.
19	Thu.	French.	German.	Moral Philosophy	German.
20	Fri.	German & Heb.	Hebrew.	French, German and Hebrew.	French & Hebrew

SESSIONAL AND HONOUR EXAMINATIONS, 1879.

Mar	DAYS.	FIRST YEAR.	SECOND YEAR.	THIRD YEAR.	B.A. EXAM'S.
30	Mon.				B.A. Honour Ex.
April					
1	Tues.	Classics.	Classics.	Math. Physics.	Metaphysics.
2	Wed.	Classics.	Classics.	Math. Physics.	Metaphysics.
3	Thu.	Classics.	Classics.	Exp. Physics.	Exp. Physics.
4	Fri.	Chemistry.	English.	Moral Philosophy	English.
7	Mon.	English.	Mathematics.	Classics.	Math. Physics.
8	Tues.		Mathematics.	Classics.	Math. Physics.
9	Wed.	French & Hebrew	French & Hebrew	Classics.	Geology.
10	Thu.	German.	German.	Zoology.	Classics.
11					
12					
13		*EASTER VACATION.*			
14					
15					
16	Wed.	Mathematics.	Botany.	French.	Classics.
17	Thu.	Mathematics.	Logic.	English.	History.
				German & Hebrew	French, German, and Hebrew.
21	Mon.				B.A. Honour Ex.
22	Tues.				B.A. Honour Ex.
24	Thu.	Honour Exam's.	Honour Exam's.	Honour Exam's.	B.A. Honour Ex.
25	Fri.	Honour Exam's.	Honour Exam's.	Honour Exam's.	B.A. Honour Ex. *Viva Voce.*

All Examinations begin at 9 a.m. and 2 p.m., unless otherwise specified. The Examinations are generally limited to the morning.

Faculty of Arts.

The Principal (Ex-officio).

Professors :—Leach.
De Sola.
Dawson.
Markgraf.
Johnson.

Professors :—Cornish.
Darey.
Murray.
Harrington.
Bovey.

Dean of the Faculty :—Ven. Archdeacon Leach, D.C.L., LL.D.

Vice-Dean :—Alexander Johnson, LL.D.

Librarian :—Professor Markgraf.

[Contents.—*Course of Study*, §I. ; *Matriculation*, &c., §II. ; *Exhibitions*, &c., §III. ; *Examinations*, &c., §IV. ; *Exemptions*, &c., §V. ; *Medals*, &c., §VI. ; *Licensed Boarding-houses*, §VII. ; *Attendance*, &c., §VIII. ; *Library*, &c., §IX. ; *Fees*, &c., §X. ; *Courses of Lectures*, §XI.]

The next Session of this Faculty will commence on September 16th, 1878, and will extend to April 30th, 1879.

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§ I. COURSE OF STUDY.

1. Undergraduates are arranged according to their standing, as Students of the First, Second, Third or Fourth Years; and are required to attend all the Courses of Lectures appointed for their several years, under the Regulations as to attendance and conduct stated in §VIII. The only exceptions are those in favour of Honour and Professional Students, stated in §V.

ORDINARY COURSE FOR THE DEGREE OF B. A.

First Year.—Classics ; French or German ; English Language and Literature ; Pure Mathematics ; History ; Elementary Chemistry.

Second Year.—Classics ; French or German ; Logic and Elementary Psychology ; Pure Mathematics ; Botany.

Third Year.—Classics ; Rhetoric ; Moral Philosophy ; Mixed Mathematics ; Experimental Physics ; Zoology.

Fourth Year.—Classics; English Literature ; Mental Philosophy ; Mixed Mathematics ; Experimental Physics ; Mineralogy and Geology.

Undergraduates are required to study either French or German for two years, [viz., in the First and Second Years] taking the same language in each year. Any Student failing to pass the Examination at the end of the Second Year, will be required to pass a Supplemental Examination, or to take an additional Session in the Language in which he has failed. In addition to the obligatory, there are other Lectures, attendance on which is optional.

The Lectures in Modern Languages will be so arranged that Students competent and desirous to take in the same years the Lectures in French and in German, may do so.

Students who intend to join any Theological School, on giving written notice to this effect at the beginning of the First Year, may take Hebrew instead of French or German.

The Faculty may permit any Student to take Spanish instead of French or German.

2. At the examination for the Degree of B. A., Honours are given in the following subjects, for which special Honour Courses are provided :—[For details see under §XI.]

1. *Classical Languages and Literature.*
2. *Mathematics and Physics.*
3. *Logic and Mental and Moral Philosophy.*
4. *English Language, Literature and History.*
5. *Geology and other Natural Sciences.*

Students taking B. A. Honours in any of the above Courses, may omit two of the ordinary subjects in the Degree Examination, under the conditions stated in §V., 11.

Honours are given in the above subjects in the Third Year also, and in Mathematics in the First and Second Years as well.

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§ II. MATRICULATION AND ADMISSION.

1. Candidates for Matriculation as Undergraduates are required to present themselves to the Dean of the Faculty, on the 17th of September, for examination; they may, however, enter after the commencement of the Session, if, on examination, found qualified to join the classes.

The subjects of examination for entrance into the First Year, are Classics, Mathematics and English.

In Classics.—Latin Grammar, Greek Grammar, and one easy Latin and one easy Greek Author. The authors recommended are Cæsar; Sallust; Virgil (Æneid, B. I.); Xenophon (Anabasis, B. I.); Homer (Iliad, B. I.)

In Mathematics.—Arithmetic ; Algebra, to Simple Equations, inclusive; Euclid's Elements, Books I., II., III.

In English.—Writing from Dictation. English Composition. A paper on English Grammar.

[Associates in Arts who, at their special Examination, have passed in Latin, Greek, English, Algebra and Geometry, are not required to present themselves for the Matriculation Examination.]

2. Candidates not matriculated in the University may be admitted to the standing of students of the Second Year, provided that they pass the Sessional Examinations of the First Year, or an examination in the following subjects at the beginning of the Second Year :—

In Classics.—*Greek.*—Homer, Book VI. ; Xenophon, Anabasis, Book I ; Grammar, and Prose Composition.

Latin.—Virgil, Æneid, Book VI. ; Cicero, Orations against Catiline ; Grammar and Prose Composition.

In Mathematics.—

Euclid.—Books I., II., III., IV., VI., with defs. of Book V. (omitting propositions 27, 28, 29, of Book VI.).

Algebra.—To end of Quadratic equations (Colenso's Alg.).

Trigonometry.—Galbraith and Haughton's Trigonometry, Chaps. 1, 2, 3, 4, 6, to beginning of numerical solution of plane triangles.

Arithmetic. — Ordinary rules, Proportion, Interest, Discount, &c., Vulgar and Decimal Fractions, Square Root.

In English Literature.—English Grammar and Composition.

In French or German.—Grammar and easy Translation.

[Candidates must satisfy the Professor of French that they have a fair knowledge of De Fiva's Grammaire des Grammaires as far as Syntax; failing this or the knowledge of German requisite to join the regular class, they may *commence* the study of German, which they will then be required to carry on for two years.]

Students of other Universities may be admitted, on the production of Certificates, to a like standing in this University, after examination by the Faculty.

PARTIAL STUDENTS.—Candidates for Matriculation as Partial students taking three or more Courses of Lectures, or as students in any Special Course, will be examined in the subjects necessary thereto, as may from time to time be determined by the Faculty.

OCCASIONAL STUDENTS.—Persons desirous of taking one or two Courses of Lectures, as Occasional students, may apply to the Vice-Dean for entry in his Register, and may procure from the Secretary tickets for the Lectures they desire to attend.

Every student is expected to present, on his entrance, a written intimation from his parent or guardian, of the name of the minister of religion under whose care and instruction it is desired that the student shall be placed, who will thereupon be invited to place himself in communication with the Faculty on the subject. Failing such intimation from his parent or guardian, the Faculty will endeavour to establish such relations.

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§ III. SCHOLARSHIPS AND EXHIBITIONS.

General Regulations.

1. A Scholarship is tenable for *two* years. An Exhibition for *one* year.

2. Scholarships are open for competition to Students who have passed the University Intermediate Examination, provided that not more than three Sessions have elapsed since their Matriculation ; and also to candidates who have obtained what the Faculty may deem equivalent standing in some other University.

3. Scholarships are divided into two classes :—[1] *Science* Scholarships ; [2] *Classical and Modern Language* Scholarships. The subjects of Examination for each are as follows :—

Science Scholarships,—Differential and Integral Calculus ; Analytic Geometry ; Plane and Spherical Trigonometry ; Higher Algebra and Theory of Equations ; Pure Mathematics (as in Ordinary Course) ; Botany ; Chemistry ; Logic.

Classical and Modern Language Scholarships.—Greek ; Latin ; English Composition ; English Language and Literature ; French.

4. Exhibitions are assigned to the First and Second Years.

First Year Exhibitions are open for competition to candidates for entrance into the First Year.

Second Year Exhibitions are open for Competition to Students who have passed the First Year Sessional Examination, provided that not more than two Sessions have elapsed since their Matriculation ; and also to candidates for entrance into the Second Year.

The subjects of Examination are as follows :—

First Year Exhibitions.—Classics, Mathematics, English.

Second Year Exhibitions.—Classics, Mathematics, English Language, Chemistry. [In September 1879, French also.]

5. The First and Second Year Exhibition Examinations will, for Candidates who have not previously entered the University, be regarded as Matriculation Examinations.

6. No student can hold more than one Exhibition or Scholarship at the same time ; but four of the First Year Exhibitioners will be granted exemption from the Sessional fees throughout their College Course, under Presentation Scholarships from the Governor General. (See below.)

7. Exhibitions and Scholarships will not necessarily be awarded to the best answerers at the Examinations. Absolute merit will be required.

8. If in any one College Year there be not a sufficient number of Candidates showing absolute merit, any one or more of the Exhibitions or Scholarships offered for competition may be transferred to more deserving Candidates in another year.

9. A successful Candidate must, in order to retain his Scholarship or Exhibition, proceed regularly with his College Course to the satisfaction of the Faculty.

10. The annual income of the Scholarships or Exhibitions will be paid in four instalments, viz :—in October, December, February and April, about the 20th day of each month.

11. The Examinations will be held at the beginning of every Session.

There are at present thirteen Scholarships and Exhibitions.

THE JANE REDPATH EXHIBITION, founded by Mrs. Redpath, of Terrace Bank, Montreal :—value, $100 yearly.

THE MCDONALD SCHOLARSHIPS AND EXHIBITIONS, ten in number, established by W. C. McDonald, Esq., Montreal :—value, $125 each, yearly.

THE GOVERNORS' SCHOLARSHIP, established by the Board of Governors :—value about $120 yearly.

THE CHARLES ALEXANDER SCHOLARSHIP, founded by Charles Alexander, Esq., Montreal, for the encouragement of the study of Classics and other subjects :—value, $120 yearly.

EXHIBITIONS AND SCHOLARSHIPS TO BE OFFERED IN SEPTEMBER, 1878

First Year.

THREE EXHIBITIONS.—One of $125, two of $100. The examinations will be in the following subjects :—

Greek.—Homer, Iliad, bk. I. ; Xenophon, Anabasis, bk. I. ; Demosthenes, Philippic I.

Latin.—Cicero, Pro Lege Manilia ; Horace Odes, bk. I. ; Ovid, Fasti, bk. I., vss. 1—300.

Latin Prose Composition.

A paper on Greek and Latin Grammar.

Text Books.—Hadley's Elements of Greek Grammar.—Arnold's Greek Prose Composition, Exercises 1 to 25. Dr. Wm. Smith's Smaller Latin Grammar, and Principia Latina, Part IV.

Mathematics.—Euclid, bks. I., II., III., IV. ; Algebra to end of Harmonical Progression (Colenso). Arithmetic.

English.—English Grammar and Composition.—(Bain's Grammar, as far as Derivation.) Special exercises in Grammar and Composition.

Additional Exhibitions may be given in the First Year, should there not be qualified candidates in the Second and Third Years.

Second Year.

TWO EXHIBITIONS.—Two of $125 each.

The Examinations will be in the following subjects :—

Greek.—Homer, Iliad, bk. VI., and Odyssey, bk. XII. ; Xenophon, Hellenics, bk. I. ; Herodotus, bk. I., Chaps. 26 to 91, inclusive, omitting Chaps. 57 to 68, inclusive.

Latin.—Horace, Odes, bk. III. ; Livy, bk. IX., Chaps. 1 to 25, inclusive ; Virgil, Æneid, bk. VI. ; Cicero, Select Letters (Pritchard and Bernard). Greek and Latin Prose Composition.
A paper on Grammar and History.

Text Books.—Dr. William Smith's History of Greece. Liddell's History of Rome. Hadley's Greek Grammar. Smith's Student's Latin Grammar. Arnold's Greek Prose Composition. Smith's Principia Latina, Parts IV. and V. (A special paper will be set in Grammar and History.)

Mathematics.—The Mathematics (Ordinary and Honour) of the First Year.

English Literature.—Bain's Grammar; Latham's Hand-Book, Prosody ;—Special exercises in Grammar and Composition.

Chemistry.—The metallic Elements as in Wilson's Elementary Chemistry.

Third Year.

FOUR SCHOLARSHIPS.—Three of $125 yearly, and one of $120.

Two of these will be given on Examinations in Science as follows :—one in Mathematics and Logic; and one in Natural Science and Logic :—

1. *Mathematics.*—Differential Calculus (Hall, Chaps. 1 to 8 inclusive, Chaps. 12 and 14). Integral Calculus (Hall, Chaps. 1 to 6 inclusive). Analytic Geometry (Salmon's Conic Sections). Hind's Plane and Spherical Trigonometry. Salmon's Modern Higher Algebra, (first six chapters). Todhunter's Theory of Equations. All the pure Mathematics of Ordinary Course with remainder of Drew's Conic Sections and of Colenso's Algebra [Part I.].
Logic, as in Whately's Logic, Books II. and III.

2. *Natural Science.—Botany*, as in Gray's Structural and Systematic Botany. *Canadian Botany*, including a practical acquaintance with all the orders of Phænogams and Acrogens. *Chemistry*, as in Wilson's Elements.
Logic, as in Whately's Logic, Books I. and II.

Two will be given on an Examination in Classics and Modern Languages, as follows :—

Classics—Greek.—Euripides, Medea ; Demosthenes, the Olynthiacs ; Xenophon Hellenics, Book I. ; Herodotus, Book VIII. ; Thucydides, Book I.,

Latin.—Horace, Satires, Book I., and Epistles, Book I. ; Virgil, Georgics, Book I. ; Terence, Adelphi ; Tacitus, Annals, Book I. ; Pliny, Select Letters (Pritchard and Bernard ; Clarendon Press Series).

Greek and Latin Prose Composition.

History—Text Books.—Rawlinson's Manual of Ancient History ; Smith's Greece ; Liddell's Rome.

English Language and Literature.—Spalding's English Literature ; Bacon's Essays ; Klipstein's Anglo-Saxon Grammar ; Trench's Study of Words ; Trench's English, Past and Present.

English Composition.—(High marks will be given for this subject, in order to encourage the practice of it, after the models of the best writers.)

French.—Racine, Britannicus ; Moliere, les Femmes savantes. De Fiva's Grammaire des Grammaires. Bonnefon, French Literature to the end of 18th century. Translation from English into French.

EXEMPTIONS FROM FEES UNDER PRESENTATION SCHOLARSHIPS, &c.

A number of these are in the gift of Benefactors, and entitle the students holding them to Exemption from the Sessional Fees in the Faculty of Arts. Sixteen have been placed by the Governors at the disposal of His Excellency the Governor General. Candidates must pass the usual Matriculation Examination.

[By command of His Excellency, four of these Exemptions will be offered for competition in the First Year Exhibition Examinations of the ensuing session.]

Eight Exemptions from fees may be granted by the Board of Governors, from time to time, to the most successful students who may present themselves as candidates. By order of the Board one of these is given annually to the *Dux* of the High School, and of any other Academy or High School, sending up in one year, three or more candidates competent to pass creditably the Matriculation Examination.

In the event of any Academy or High School in the Province of Quebec offering for competition among pupils an Annual Bursary in the Faculty of Arts, of not less than $80, the Governors will add the amount of the fees of tuition thereto.

An Exemption from fees may be given annually to any teacher holding the Model School or Academy Diploma of the McGill Normal School, recommended by the Principal and Professors of the School, and passing creditably the Matriculation Examination in Arts.

§ IV. EXAMINATIONS.

COLLEGE EXAMINATIONS.

1. There are two Examinations in each year; one at Christmas, and the other at the end of the Session. In both of these, students are arranged according to their answering, as 1st Class, 2nd Class, and 3rd Class.

In the Fourth Year only, the University Examination for B.A., takes the place of the Sessional Examination.

Fourth Year Students are required, at the Christmas Examinations to pass in all the subjects of the obligatory lectures even though some of the subjects do not from part of their B. A. Examination.

2. Students who fail in any subject in the Christmas Examinations, are required to pass a Supplemental Examination in that subject before admission to the Sessional Examinations.

3. Students who fail in one subject in the Sessional Examinations are required to pass a Supplemental Examination in it. Should they fail in this, they will be required in the following Session to attend the Lectures and pass the Examination in the subject in which they have failed, in addition to those of the Ordinary Course or to pass the Examination alone without attending Lectures, at the discretion of the Faculty.

4. Failure in two or more subjects at the Sessional Examinations involves the loss of the Session. The Faculty may permit the Student to recover his standing by passing a Supplemental Examination at the beginning of the ensuing Session. For the purpose of this Regulation, Classics and Mathematics are each regarded as two subjects.

5. The time for the Supplemental Examination will be fixed by the Faculty; and such Examination will not be granted at any other time except by special permission of the Faculty and on payment of a fee of $5.

UNIVERSITY EXAMINATIONS.

1. FOR THE DEGREE OF B. A.

There are three University Examinations:—The *Matriculation*, at entrance; the *Intermediate*, at the end of the Second Year; and the *Final*, at the end of the Fourth Year.

1. The subjects of the Matriculation Examination are stated in Section II.

2. In the Intermediate Examination the subjects are Classics and Pure Mathematics, Logic, and the English Language, with one other Modern Language, or Botany. Theological Students are allowed to take Hebrew instead of a Modern language. The subjects for the Examination of 1879 are as follows:—

Classics.—Greek.—Isocrates.—The Panegyricus.
Latin.—Pliny.—Select Letters.
Latin Prose Composition.

Mathematics.—Arithmetic.
Euclid, Books I., II., III., IV., VI., and defs. of Book V.
Algebra, to Quadratic Equations inclusive.
Trigonometry, including use of Logarithms.

Logic.—Whately's Logic, Books II. and III.

English.—An English Essay. Spalding's History of English Literature.
With one of the following:—

1. *Botany and Vegetable Physiology.*—Structural and Systematic Botany, as Gray's Text-book, omitting the Descriptions of the Orders.
2. *French.*—Moliere.—Bourgeois gentilhomme, l'Avare; Racine.—Britannicus History of French Literature from its commencement to the end of the 17th century (as in Bonnefon); Translation into French.
3. *German.*—Schmidt's German Guide. Adler's Reader. Translation into German.
4. *Hebrew.*—Grammar to the end of the Irregular verbs. Translation from the Book of Genesis. Exercises:—Hebrew into English, and English into Hebrew.

3. For the Final Examination six subjects are offered for selection namely:—[1] Classics, [2] Mixed Mathematics, [3] Mental and Moral Philosophy, [4] Natural Science, [5] Experimental Physics, [6] One Modern Language and Literature (or Hebrew), with History. Every candidate must pass in four of these, namely:—Classics and Mixed Mathematics, which are obligatory, and any two of the remaining subjects, at his option. The subjects for 1879 are as follows:—

1. *Classics.*—Greek.—Demosthenes.—The Olynthiacs.
Aeschylus.—Prometheus Vinctus.
Latin.—Tacitus.—Annals, Book II.
Plautus.—Aulularia.

Latin Prose Composition.
General Paper in Grammar and History.

2. *Mathematics.*—Mechanics. Hydrostatics. Optics. Astronomy. } As treated in Galbraith and Haughton's Manuals.

[Except in the case of Exemptions to Professional Students as stated in § V.]

3. *Mental and Moral Philosophy.*—Murray's Outline of Hamilton's Philosophy. Stewart's Outline of Moral Philosophy, Part II.

4. *Natural Science.*—Geology and Mineralogy, as in Dana's Geology and Manual of Mineralogy.—The Zoology, Botany and Chemistry necessary to the study of the books above named; or as in Dawson's Hand-Book of Zoology; Gray's Structural and Systematic Botany, and Wilson's Inorganic Chemistry.

5. *Experimental Physics.—Electricity.*—Statical and Dynamical, including:—Electro-Magnetism.—Magneto-Electricity.—Thermo-Electricity.—Diamagnetism.—Electric Measurements.—Practical Applications to Telegraph, &c. *Magnetism.—Acoustics.*—Theory of Undulations.—Production and Propagation of Sound.—Vibrations of Strings, Rods, and Plates.—Vibrations of Fluids.—Musical sounds.

6. *History and English Literature.*—Smith's Student's Gibbon.—Smith's Student's Hume,—Marsh's Hand-Book of the English Language and Collier's History of English Literature.

Or instead of History and English, candidates may take one of the following:—

(a) *History and French.*—History as above. The course of French for the Fourth Year.—Boileau, Art poétique; Fénelon, Lettre à l'Académie; Translation into French, and French Composition.

(b) *History and German.*—History as above. Schiller, Geschichte des 30 jahrigen Krieges; Goethe, Iphigenie auf Tauris; General paper on Grammar; Translation into German and German Prose Composition.

(c) *History and Hebrew.*—(Theological Students only.) History as above. Hebrew Grammar; Translation from first four chapters of Isaiah; any three of the Psalms; the Chaldaic portions of the Scriptures; Targum of Onkelos on Genesis, Chap. I.; Modern Hebrew Poetry, Halevi or Gabirol.

2. FOR THE DEGREE OF M.A.

Bachelors in Arts, of at least three year's standing, are entitled to the degree of Master of Arts after such examination and exercises as may be prescribed by the Corporation. The Regulation at present is, that the Candidate shall prepare a Thesis on some literary, scientific, or professional subject, approved by the Faculty.

Such Thesis shall be reported on by the Faculty to the Corporation before the granting of the Degree.

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§ V. SPECIAL PROVISIONS FOR CANDIDATES FOR HONOURS AND FOR PROFESSIONAL STUDENTS.

I. Candidates for Honours in the Third Year.

Candidates for Honours who, at the Sessional Examination of the Second Year, have passed in the First Class in the subjects in which they purpose to compete for Honours, and not below Second Class in the others, may on application to the Faculty be allowed the following exemptions :—

They may in the Lectures and Examinations of the Third Year omit any one of the following subjects provided it is not immediately connected with that in which they study for Honours :—(1) Greek. (2) Latin. (3) Optics. (4) Rhetoric. (5) Moral Philosophy. (6) Experimental Physics. (7) Zoology.

The particular exemption desired must be stated to the Faculty in the application of the candidate, and no change can be made subsequently.

For the purpose of the above Regulations, the subjects of the Second Year in which Honours are given in the Third Year are classified under the following heads:—

1. Classics. 2. Mathematics and Physics. 3. Logic, Moral and Mental Philosophy. 4. Natural Science. 5. English.

The candidate must pursue the Honour course selected to the satisfaction of the Professor, and must pass the Examination therein.

The above exemptions shall be granted only with reference to Honour subjects in which regular courses of Lectures are delivered in the Third Year.

II. Candidates for B. A. Honours.

Students who have attained Honours at the end of the Third Year in any subject, and wish to be candidates for B.A. Honours in the same subject, are entitled to exemptions if they have been placed in the 1st or 2nd Class in any two of the four subjects required for the Final Examination. The Regulations concerning these exemptions are as follows :—

[1] EXAMINATIONS.—They may claim to have the Third Year Examination in the two subjects referred to regarded as a B. A. Examination in the same. [This amounts to exemption at the ordinary B. A. Examination from two of the four subjects required above].

[2] LECTURES.—They are required to attend the Ordinary Lectures of the Fourth Year [for which see § I and Time Table] in three subjects only. Two of these must be the subjects in which they are to pass the ordinary B. A. Examination, if Lectures are delivered in them; if not, the choice is left to the Candidate.

[N. B. Candidates are required to pass the Christmas Examination in the subjects in which they attend the ordinary Lectures.]

III. Law and Medical Students.

1. Students of the Third and Fourth Years, matriculated in the Faculties of Law or Medicine of the University, are entitled to the following exemptions:—

In the Third year they may omit the Lectures and Examinations in Optics, and in any one of the following subjects:—Zoology, Experimental Physics, or Rhetoric.

In the Lectures of the Fourth year they may omit Greek and Astronomy; and also Geology or Experimental Physics. At the Christmas Examination of the Fourth year, they may omit Astronomy and Optics.

In the Ordinary B. A. Examinations, they may, in Classics, pass in Latin alone; and in Mixed Mathematics, in Mechanics and Hydrostatics alone.

2. To be allowed these privileges in either year, they must give notice at the commencement of the Session to the Dean of the Faculty of their intention to claim exemptions as Professional Students, and must produce at the end of the Session, Certificates of attendance on a full course of Professional Lectures during the year for which the exemptions are claimed.

IV. Students of Affiliated Theological Colleges.

1. Such Students, whether entered as Matriculated or Occasional are subject to the regulations of the Faculty of Arts in the same manner as other students.

2. The Faculty will make formal reports to the Governing body of the Theological College to which any such Students may belong, as to:—[1] their conduct and attendance on the classes of the Faculty; and [2] their standing in the several examinations; such reports to be furnished after the Christmas and Sessional Examinations severally, if called for.

3. Matriculated Students are allowed no exemptions in the course for the degree of B. A., till they have passed the Intermediate Examination; but they may take Hebrew in the First and Second years, instead of French or German.

4 In the Third and Fourth years they are allowed exemptions as follows :—

In the Third year, they may omit Optics and Rhetoric, with Experimental Physics or Zoology.

In the Fourth year, they may omit Astronomy and Optics and English Literature, with Experimental Physics or Geology.

5. Certificates of attendance on the full course of lectures in the Theological College, during the year for which the exemptions are claimed, must be produced by Students who avail themselves of these exemptions, before presenting themselves for Examination.

[No Student will be allowed in the same Session both Professional and Honour exemptions. Students are cautioned against difficulties that may arise from any change such as taking Professional exemptions in the Third year, and Honour Exemptions in the Fourth, or vice versâ, *e.g.*, a Professional Student who has not taken up "Optics" in the Third year, may be required by the Regulations to take it up in the Fourth if he does not claim Professional exemptions in that year.]

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§ VI. MEDALS, HONOURS, PRIZES AND CLASSING.

1. GOLD MEDALS will be awarded in the B. A. Honour Examinations to Students who take the highest Honours of the First Rank in the subjects stated below, and who shall have passed creditably the Ordinary Examinations for the Degree of B.A :—

The *Chapman Gold Medal*, for the Classical Languages and Literature.
The *Prince of Wales Gold Medal*, for Logic and Mental and Moral Philosophy.
The *Anne Molson Gold Medal*, for Mathematics and Natural Philosophy.
The *Shakspere Gold Medal*, for the English Language, Literature and History.
The *Logan Gold Medal*, for Geology and other Natural Sciences.

In the event of there being no candidate for any Medal, or of none of the candidates fulfilling the required conditions, the Medal will be withheld, and the proceeds of its endowment for the year may be devoted to prizes in the subjects for which the Medal was intended. For details, see announcements of the several subjects below.

2. HONOURS, of First or Second Rank, will be awarded to those Matriculated Students who have successfully passed the Examinations in any Honour Course established by the Faculty, and have also passed creditably the ordinary Examinations in all the subjects proper to their year.

3. CERTIFICATES of High General Standing will be granted to those Matriculated Students, who are placed in the First Class in the aggregate of the Studies proper to their year.

4. PRIZES OR CERTIFICATES, to those matriculated Students who may have distinguished themselves in the studies of a particular class, and have attended all the other classes proper to their year.

5. His Excellency the Earl of Dufferin has been pleased, for some years past, to offer a Gold and a Silver Medal for Competition in the Faculty of Arts.

[This donation is understood to be terminable with His Excellency's tenure of office. For special arrangements for October next, see appendix.]

The Regulations with respect to competition are as follows :—

1. The subject for competition shall be an Essay on any topic or period of Modern History, chosen with a due regard to the facility of gathering materials. The judges in forming their opinion shall consider no less the merit of the style than the clearness of the reasoning and the accuracy of the facts, in proof of which last, authorities must always be cited by the writers.

2. The competition shall be open to all regular students and graduates of the Faculty of Arts or of any Department of it, who have not exceeded seven years from their matriculation.

3. When sending in the Essay, the author shall conceal his name, distinguishing his composition by a motto, and sending at the same time his name sealed up in an envelope, on which the motto shall be inscribed. The envelopes of the unsuccessful candidates shall be destroyed unopened.

4. The Gold Medal shall be awarded to the best Essay, and the Silver to the next best. Absolute merit shall be required in making the award of either medal. When a medal is not awarded, it may be reserved for future competition.

5. The winner of the Silver Medal in any year may in a subsequent year compete for the Gold Medal, but in no other case shall any person be awarded two of these Medals.

The subject for the next competition will be "The Great Rebellion of 1642."

Essays for competition must be in the hands of the Dean of the Faculty of Arts, on or before October 1, 1878.

6. THE NEIL STEWART PRIZE of $20, is open to all Undergraduates of this, and also to Graduates of this or any other, University studying Theology in any College affiliated to this University, under the following rules :—

1. The prize will not be given for less than a thorough examination in

Hebrew Grammar, passed in the First Class, in reading and translating the Pentateuch and such poetic portions of the Scripture as may be determined.

2. In case competitors should fail to attain the above standard, the prize will be withheld and a prize of Forty Dollars will be offered in the following year for the same.

[Course for the present year;—Hebrew Grammar (Gesenius); Translation and analysis of the first ten chapters of Genesis; the prophet Habakkuk (the whole book); and the first five Psalms.]

3. There will be two Examinations of three hours each; one in Grammar and the other in Translation and Analysis.

This Prize founded by the late Rev. C. C. Stewart, M.A., and terminated by his death, has been re-established by the liberality of Neil Stewart, Esq., of Vankleek Hill, and will be offered for competition next Session.

7. The names of those who have taken Honours, Certificates, or Prizes, will be published, in the order of merit; and with mention, in the case of Students of the First and Second Years, of the schools, in which their preliminary education has been received.

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§ VII. LICENSED BOARDING-HOUSES.

(Regulations for Students in Arts, passed by Corporation, April 1875.)

1. All Students under 21 years of age, not residing with parents or guardians, nor belonging to a Theological College, shall reside in licensed boarding-houses, unless they produce written authority from parents or guardians to reside elsewhere.

2. Persons applying for a license to keep a boarding-house, shall produce evidence satisfactory to the Principal, as to their character and fitness, and the suitability of the house for the health and comfort of the students. They shall also supply him with a statement of charges.

3. The College shall supply to the keeper of each licensed boarding-house a Register in which the following facts shall be recorded by him or her:—(1.) The dates of the Student's entrance into and departure from the house. (2.) The hours of return of the Student to the house on every occasion on which this may be later than 10 P. M. This Register shall be returned to the Faculty at the end of every month.

4. The keeper of the boarding-house shall report immediately to the Principal, the entrance or departure of any Student, and any instance of immorality or disorderly conduct.

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§ VIII. ATTENDANCE AND CONDUCT.

All Students shall be subject to the following regulations for attendance and conduct:—

1. A Class-book shall be kept by each Professor and Lecturer, in which the presence or absence of Students shall be carefully noted; and the said Class-book shall be submitted to the Faculty at all their ordinary meetings during the Session.

2. Each Professor shall call the roll immediately at the beginning of a lecture. Credit for attendance on any lecture may be refused on the grounds of lateness, inattention or neglect of study, or disorderly conduct in the Class-room. In the case last mentioned, the student may, at the discretion of the Professor, be required to leave the Class-room. Persistence in any of the above offences against discipline, after admonition by the Professor, shall be reported to the Dean of Faculty. The Dean may, at his discretion, reprimand the student, or refer the matter to the Faculty at its next meeting, and may in the interval suspend from Classes.

3. Absence from any number of lectures can only be excused by necessity or duty, of which proof must be given, when called for, to the Faculty. The number of times of absence, from necessity or duty, that shall disqualify for the keeping of a Session, shall in each case be determined by the Faculty.

4. While in the College, or going to or from it, Students are expected to conduct themselves in the same orderly manner as in the Class-rooms. Any Professor observing improper conduct in the College buildings or grounds, may admonish the Student, and if necessary report him to the Dean.

5. Every Student is required to attend regularly the religious services of the denomination to which he belongs, and to maintain, without, as well as within, the walls of the College a good moral character.

6. When Students are brought before the Faculty under the above rules, the Faculty may reprimand, report to parents or guardians, disqualify from competing for prizes and honours, suspend from Classes, or report to the Corporation for expulsion.

7. Any Student injuring the furniture or buildings will be required to repair the same at his own expense, and will, in addition, be subject to such other penalty as the Faculty may see fit to inflict.

8. All cases of discipline involving the interest of more than one Faculty, or of the University in general, shall be immediately reported to the Principal, or in his absence, to the Vice-Principal.

§ IX. LIBRARY AND MUSEUM.

1. The books in the Library consist of two divisions :—1st, those which may be lent ; and, 2nd, those designated by the general term "Books of Reference," which may not, under any circumstances be removed from the Library.

2. A Student may borrow books from the Library on depositing the sum of four dollars with the Librarian, and signing a receipt for the books ; such deposit to be returned to the Student on his returning the books uninjured.

[NOTE.—This rule applies also to Students in Law and Medicine who have paid the Library Fee to the Secretary. They are required to present their Matriculation Tickets to the Secretary and Librarian.]

3. Students may borrow not more than three volumes at one time, except on special recommendation of a Professor, and must return them within two weeks, on penalty of a fine of one shilling for the first week of detention, and two shillings and sixpence for each subsequent week.

4. A Student incurring a fine will be debarred the use of the Library until the fine has been paid.

5. Any volume or volumes lost or damaged by a student shall be paid for by him, at such rates as the Faculty may direct, having reference to the value of the book and of the set to which it may belong.

6. Students may read in the Library at such hours as may be determined by the Faculty.

7. Professors and Lecturers may borrow any books required by them for their duties in the College, not exceeding ten volumes at any one time. Books so borrowed must be returned at or before the end of each Session.

8. Graduates in any of the Faculties, on making a deposit of four dollars are entitled to the use of the Library, subject to the same rules and conditions as students, but they are not required to pay the Annual Library Fee.

9. Members of the McGill College Book Club are, by a regulation of Corporation, entitled to the use of the Library on the same conditions as Graduates.

10. Persons not connected with the College may consult books in the Library, on obtaining an order from any of the Governors, or from the Principal, the Dean of Faculty, or any of the Professors ; and donors of books or money to the amount of Fifty Dollars may at any time consult books on application to the Librarian.

11. The Library will be open from 10 a.m. to 4 p.m., daily, except Saturdays. On Saturdays it will be open from 10 a.m. to 1 p.m.

12. No one is allowed to enter the alcoves or to take down books from the shelves, except the Governors, Members of Corporation, Professors, the Librarian and his assistants, or those whom any of the above may accompany personally.

13. A person desiring to read or to borrow a book, which he has ascertained from the Catalogue to be in the Library, will fill up one of the blank forms pro

vided for Readers and Borrowers respectively, and hand it to the Librarian, who will thereupon procure him the book.

14. Readers must return the books they have obtained to the Librarian, before leaving the Library.

15. No conversation that can disturb Readers is permitted in the Library.

16. The time and conditions of study in the Museum will be arranged by the Professors of Natural History.

§ X. FEES.

Matriculation Fee for the First Year (to be paid in the Year of Entrance only),	$4 00
For the Second Year (exigible from students who enter in the Second Year, and also from those who have failed in the First Year and re-enter in the Second Year on Examination).	6 00
Sessional Fee,	20 00
Library Fee,	4 00
Gymnasium Fee,	2 50

Undergraduates and Students in Special Courses are required to pay all the above Fees.

Partial Students, viz: those taking three or more Courses of Lectures are required to pay the Matriculation, Library and Gymnasium Fees, and $5 for each Class which they attend, or $20 for all the courses.

Occasional Students, taking one course of Lectures only are required to pay $5 per Session for that course.

Occasional Students, taking two courses of Lectures are required to pay the Library Fee and $5 for each course.

The Matriculation, Library, and Gymnasium Fees are exigible from students holding exemptions from Sessional Fees.

Graduates in Arts, are allowed to attend, without payment of fees, all lectures, except those noted as requiring a special fee.

The fees must be paid to the Secretary and the tickets shown to the Vice-Dean within a fortnight after the commencement of attendance in each session. In case of default, the Student's name will be removed from the College books, and can be replaced thereon only by permission of the Faculty and on payment of a fine of $2.

Fee for the Degree of B. A.	$ 5 00
" " " *M. A.*	10 00

If the Degree of M. A. be granted, with permission to the Candidate, on special grounds, to be absent from Convocation, the fee is - - $25 00

The B. A. fee must be paid before the Examination.

The M. A. fee must be sent to the Secretary of the University, at the same time that the Candidate sends his Thesis to the Dean of the Faculty. This is a condition essential to the entertaining of his application.

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§ XI. COURSES OF LECTURES.

I. ORDINARY COURSE.

1. CLASSICAL LITERATURE AND HISTORY.

Professor, Rev. G. CORNISH, M.A., LL.D.

GREEK.

First Year.—HOMER.—ODYSSEY, Book XII.
XENOPHON.—HELLENICS, Book II.
Greek Prose Composition.

Second Year.—
EURIPIDES.—MEDEA.
ISOCRATES.—THE PANEGYRICUS.

Third Year.—LYSIAS.—ORATIO FUNEBRIS.
ÆSCHYLUS.—PROMETHEUS VINCTUS.

Fourth Year.—DEMOSTHENES.—THE OLYNTHIACS.

LATIN.

First Year.—VIRGIL.—ÆNEID, Book VI.
CICERO.—EPISTOLAE SELECTAE.
Latin Prose Composition.

Second Year.—HORACE.—EPISTLES, Book II., and ARS POETICA.
PLINY.—EPISTOLAE SELECTAE.
Latin Prose Composition.

Third Year.—JUVENAL.—SATIRES I. and III.
PLAUTUS.—AULULARIA.
Latin Prose Composition.

Fourth Year.—TACITUS.—ANNALS, Book II.
Latin Prose Composition.

In the work of the Class the attention of the Student is directed to the collateral subjects of History, Antiquities and Geography; also to the grammatical structure and affinities of the Greek and Latin Languages; and to Prosody and Accentuation.

2. ENGLISH LANGUAGE AND LITERATURE.

(MOLSON PROFESSORSHIP.)

Professor, VEN. ARCHDEACON LEACH, D.C.L., LL.D.

First Year.—English Language and Literature.—Anglo-Saxon Grammar.—Text-Books—Bain's English Grammar; Spalding's History of English Literature; Klipstein's Anglo-Saxon Grammar.

Third Year.—Rhetoric.—Text-Book—Whately's Rhetoric, I., II., III.

Fourth Year.—English Literature.—Text-Book—Marsh's Hand-Book.

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3. LOGIC, MENTAL AND MORAL PHILOSOPHY.

(JOHN FROTHINGHAM PROFESSORSHIP OF MENTAL AND MORAL PHILOSOPHY).

Professor, REV. J. CLARK MURRAY, LL.D.

Second Year.—Elementary Psychology.—Text-Book—Stewart's Outlines of Moral Philosophy, Part I.—Logic—Text-Book—Whateley's Logic.

Third Year.—Moral Philosophy.—Text-Book—Stewart's Outlines, Part. II.

Fourth Year.—Mental Philosophy.—Text-Book—Murray's Outline of Hamilton's Philosophy.

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4. FRENCH LANGUAGE AND LITERATURE.

Professor, P. J. DAREY, M.A., B. C. L.

First Year.—DE FIVAS, Grammaire des Grammaires.
LA FONTAINE, les Fables.—MOLIERE, le Bourgeois gentilhomme.
Dictation. Colloquial exercises.

Second Year.—DE FIVAS, Grammaire des Grammaires.
RACINE, Britannicus.—MOLIERE, l'Avare.
Translation into French:—DR. JOHNSON, Rasselas.
History of French Literature:—BONNEFON, Ecrivains célèbres de la France, (to the eighteenth century.)
Dictation. Parsing. Colloquial exercises.

Third Year.—POITEVIN, Grammaire élémentaire.
EMILE SOUVESTRE, Un Philosophe sous les toits.
CORNEILLE, le Cid.
Translation into French—GOLDSMITH, Vicar of Wakefield.
French Composition. Dictation.
History of the French Literature of the 18th and 19th centuries:—BONNNEFON, Ecrivains modernes.

Fourth Year.—BARRIERE et CAPENDU, les Faux bons hommes.
PONSARD, l'Honneur et l'Argent.
Lectures on French Literature.

Translation into French, Shakspere, "As you like it."
French Composition. Dictation.

The Lectures in the Third and Fourth Years are given in French.

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5. GERMAN LANGUAGE AND LITERATURE.

Professor, C. F. A. MARKGRAF, M. A.

First and Second Years— Ordinary Course:—This Course comprises Grammar, Reading and Analysis, Translations oral and written, and Dictation Special regard is had to the affinities of the German with the English. Text-Books; Schmidt's German Guide (1st and 2nd Course); Adler's Progressive German Reader.

First Year.—Advanced Course.—Text-Books;—Schmidt's German Guide (1st and 2nd Course); Adler's Progressive German Reader.

Second and Third Years.—Advanced Course;—Text Books—Schmidt's German Guide (3rd Course); Readings in German Prose and Poetry (the Books to be used will be made known at the commencement of the Session.) Translations from English writers and Composition.

During this Course a series of Lectures will be delivered on the History of German Literature, from the earliest periods down to the classical age of Goethe and Schiller; closing with a brief notice of the state of German Literature at the present day.

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6. HEBREW AND ORIENTAL LITERATURE.

Professor, REV. A. DE SOLA, LL.D.

Elementary Course.—For Students of the First and Second Years.—Grammar;—Text-Book, Gesenius' Hebrew Grammar, with exercises in Orthography and Etymology. Reading; Translation and Grammatical Analysis of Historical Portions of the Scriptures—Syntax—Mishlé Shualim—Fables, &c.

Advanced Course.—(For Students of the Second, Third and Fourth Years.)—Introduction to the study of Hebrew Poetry—its spirit and characteristics. Lowth and Sarchi as Text-Books. Translation from the Psalms, Lamentations and Isaiah. Ancient compared with Modern Hebrew Poetry; the productions of Halevi, Gabirol, &c., Grammar, Exercises, &c., continued.

The Chaldee Language:—Grammar, *Mebo Halashon Aramith* of J. Jeitteles. The Chaldee portions of Scripture. Targum of Onkelos and T. Yerushalmi.

The Syriac Language:—Grammar, (Uhlemann's) and Translation.

The course comprises lectures on the above Languages and their Literature in particular, with a general notice of the other Oriental Languages, their genius and peculiarities. Comparative Philology, affinity of roots, &c., also receive due attention, while the portions selected for translation will be illustrated and explained by reference to Oriental manners, customs, history, &c.

7. SPANISH LANGUAGE AND LITERATURE.

Rev. Professor DE SOLA.

(Extra Fee for this Class, $5.00.)

The study of the Spanish Language on this continent, being generally pursued with special reference to commercial purposes, it will be sought to impart in this course, a practical knowledge of the Castilian, the richest and most harmonious of the Peninsular languages—as well as an acquaintance with its Literature.

Ollendorf's Spanish Grammar by Velazquez and Simmone, and the Reader of Velazquez, are the Text-Books employed in the Junior Class, who will also be exercised in composition by both written and oral exercises. In the Senior Class, Fernandes' Exercises, continuation of Grammar and Composition, Cervantes' Don Quixote, Quintana, Vida del Cid, and Mariana's Historia will be the subjects of study. Besides a special comparison with the Portuguese Language, a general notice, literary and historical, of the Bascuence and other dialects, will be given.

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8 MATHEMATICS AND NATURAL PHILOSOPHY.

(PETER REDPATH PROFESSORSHIP OF NATURAL PHILOSOPHY.)

Professor, ALEXANDER JOHNSON, M.A., LL.D.

(In the work of the First and Second Years assistance will be given by G.H. Chandler, B.A., Lecturer in Mathematics in the Faculty of Applied Science.)

MATHEMATICS.—*(First Year)*—Arithmetic.—Euclid, Books, 1, 2, 3, 4, 6, with Definitions of Book 5 (omitting propositions 27, 28, 29, of Book 6). Todhunter's Edition.—Colenso's Algebra, Part 1, to end of Quadratic Equations.—Galbraith and Haughton's Plane Trigonometry to beginning of solution of Plane Triangles.

MATHEMATICS.—*(Second Year)*—Arithmetic, Euclid, Algebra, and Trigonometry as before.—Nature and use of Logarithms.—Remainder of Galbraith and Haughton's Plane Trigonometry—Conic Sections treated Geometrically. The Parabola (as in Drew's Conic Sections,) the definitions of the Ellipse and Hyperbola, with the fundamental properties of their tangents.—Euclid, Book XI., Props. 1 to 21 ; Book XII., Props. 1, 2.

The course for the Intermediate University Examination consists of the Mathematics for the first two years except Conic Sections and Solid Geometry.

MATHEMATICAL PHYSICS. —(*Third Year*) — Galbraith and Haughton's Mechanics (omitting chap. 5 of Statics), Hydrostatics, Optics.

At the Ordinary Examination in Mechanics answers to questions on the Chapters on Friction, Collision of Bodies and Projectiles, will be taken into account only in awarding a place in the First Class.

ASTRONOMY.—(*Fourth Year*)—Galbraith and Haughton's Astronomy—The lectures in this subject will be given before Christmas.

EXPERIMENTAL PHYSICS.—(*Third and Fourth Years.*)—1.—*Light.*—Theories.—Reflection.—Refraction.—Dispersion.—Interference and Diffraction.—Double Refraction.—Polarisation. 2.—*Heat.*—Dilatation of Solids, Liquids and Gases.—Specific and Latent Heat.—Radiation and Conduction.—Mechanical Theory of Heat. 3—.*Electricity.*—Statical and Dynamical; including Electro-Magnetism—Magneto-Electricity.—Thermo-Electricity.—Diamagnetism.—Electric Measurements.—Practical Applications to Telegraph, &c. 4.—*Magnetism.* 5.—*Sound.*—Theory of Undulations.—Production and Propagation of Sound—Vibrations of Strings, Rods, and Plates.—Vibrations of Fluids.—Musical sounds. Text-Books:—Ganot's Treatise translated by Atkinson, and Tyndall on Heat and Sound. This Course extends over two years.

The Subjects for the Session 1878-9 are Electricity, Magnetism and Sound.

The Lectures in Mathematical and Experimental Physics will be illustrated by Apparatus, of which the College has a very good collection.

9. GEOLOGY AND NATURAL HISTORY.

(LOGAN PROFESSORSHIP OF GEOLOGY.)

Professor, J. W. DAWSON, LL.D., F.R.S., F.G.S.

B.J. Harrington B.A. Ph. D. Assistant Professor of Geology.

I. BIOLOGICAL COURSE.

BOTANY.—(*Second Year.*)—Vegetable Histology and Organography. Nutrition and Reproduction of Plants. Classification. Descriptive Botany. Flora of Canada. Palæobotany and Geographical Botany.

Text-Book.—Gray's Structural and Systematic Botany.

[A prize of $20 will be given by the Professor for the best collection of plants, and the greatest proficiency in their determination. The prize collections or duplicates of them to remain in the College Museum. Candidates must be students in Botany of the previous session.]

ZOOLOGY AND PALÆONTOLOGY. (*Third Year*)—Elements of Animal Physiology. Classification of Animals. Characters of the Classes and Orders of Animals, with Recent and Fossil Examples.

Text-Book.—Dawson's Hand-book of Zoology, with books of reference.

II. GEOLOGICAL COURSE.

MINERALOGY AND GEOLOGY. (*Fourth Year.*)

(1) *Mineralogy.*—Chemical and Physical characters of Minerals, including Crystallography, the methods of determining species, and Descriptive Mineralogy; with special reference to those species most important in Geology, or useful in the Arts.

(2) *Lithology and Stratigraphy.*—Composition of Rocks and their structure on the small scale; Classification of Rocks, Arrangement of Rocks on the large scale; Stratification, Elevation and Disturbances, Denudation.

(3) *Chronological Geology and Palæontology.*—Data for determining the relative ages of Formations. Classification according to age. Fauna and Flora of the successive periods. Geology of British America.

Text-Books.—Dana's Manuals of Mineralogy and Geology, with Lyell's Student's Elements.

The Lectures in Natural History will be accompanied with demonstrations in the Museum. Students in Natural History are also entitled to tickets of admission to the Museum of the Natural History Society of Montreal.

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10. CHEMISTRY.

Lecturer, B. J. HARRINGTON, B. A., Ph. D.

First Year.—A course of Elementary Chemistry preparatory to the course in Natural Science and Practical Science.

Text Book.—Wilson's Inorganic Chemistry.

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11. METEOROLOGY.

Superintendent of Observatory, C. H. MCLEOD, Bac. App. Sc.

Instruction in Meteorological Observations will be given, in the Observatory, at hours to suit the convenience of the senior students.

Certificates will be granted to those Students who attain sufficient proficiency in the methods of observation.

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12. ELOCUTION,

Mr. JOHN ANDREW, Instructor.

Students are recommended by the Faculty to avail themselves of the instructions of Mr. Andrew, who will make arrangements for evening classes to meet during the Session.

II. HONOUR COURSES.

1. CLASSICS.

B. A. HONOURS, BEING THE HONOUR COURSE FOR STUDENTS OF THE THIRD AND FOURTH YEARS.

Candidates for B. A. Honours in Classics, will be examined in the following subjects :—

I. GREEK.

I.—*Greek Philosophy.*

Plato.—Republic, Books I. and II.

Aristotle.—Nicomachean Ethics, Books I. and II.

II.—*Greek History.*

Herodotus.—Books VIII. and IX.
Thucydides.—Book I.
Xenophon.—Hellenics, Books I. and II.

III.—*Greek Poetry.*

a. Epic.—Homer.—Odyssey, Books I. II. and III.
Hesiod.—Works and Days.

b. Dramatic.—Æschylus.—Prometheus Vinctus.
Seven against Thebes.
Sophocles.—Antigone.
Euripides.—Hippolytus.
Aristophanes.—The Frogs.

c. Lyric and Bucolic.—Pindar.—Olympic Odes.
Theocritus.—Idyls, I. to IV.

IV.—*Greek Oratory.*

Demosthenes.—De Corona.
Æschines.—Contra Ctesiphontem.

II. LATIN.

I.—*Roman History.*

Livy.—Books XXI., XXII. and XXIII.
Tacitus.—Annals, Books I. and II.
Histories, Book I.

II.—*Roman Poetry.*

a. Epic.—Virgil.—Æneid, Books I. to IV.

b. Dramatic.—Plautus.—Aulularia.
Terence.—Adelphi.

c. Satiric.—Horace.—Satires, Book I.
Juvenal.—Satt. VIII. and X.
Persius.—Satt. V. and VI.

III.—*Roman Oratory and Philosophy.*

Cicero.—De Imperio Cn. Pompeii.
De Officiis.

III. HISTORY OF GREECE AND ROME.

Text Books :—

1. Grote's History of Greece.
2. Arnold's History of Rome.
3. Mommsen's History or Rome.

IV. COMPOSITION.

1. Composition in Greek and Latin Prose
2. General paper on Grammar, History and Antiquities.

The Examination for B. A. Honours will extend over four days, in the morning from 9. to 12, and the afternoon from 2 to 5.

2. LOGIC, MORAL PHILOSOPHY, AND MENTAL PHILOSOPHY.

The Honour Course in this department extends over the Third and Fourth Years. The Lectures of the Third Year review the Ancient Greek Philosophy, while those of the Fourth Year discuss the chief modern systems in connection with the existing tendencies of speculation.

In the Third Year, the Examination will be on the following works, in addition to the Lectures of that Year :—

Schwegler's History of Philosophy, Chapters 1—21, inclusive.
Thomson's Outline of the Laws of Thought, Parts I., II., and III.

For B. A. Honours, the following works will form the subjects of Examination, besides the Lectures of the Third and Fourth Years.

Schwegler's History of Philosophy.
Thomson's Outline of the Laws of Thought, Parts I., II., and III.
Mill's Logic.
Kant's Critique of the Pure Reason.
Kant's Theory of Ethics (translated by T. K. Abbott.)
Plato's Republic.

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3. ENGLISH LANGUAGE, LITERATURE, AND HISTORY.

The examination for Honours in the Third Year will be on the works in the following course :—

I. *Language*—
Trench's Study of Words.
Trench's English, Past and Present.
Trench's Glossary.

II. *Literature*—
Milton.—Paradise Lost ; Comus ; Lycidas ; L'Allegro.
Dryden.—Absalom and Achitophel ; Annus Mirabilis ; Dedications to his Translation of Virgil's Æneid and the Satires of Juvenal.
Pope.—Dunciad ; Essay on Criticism ; Rape of the Lock ; Eloisa and Abelard ; Prefaces to his Translations of Homer's Iliad and Odyssey.
Bacon.—Essays.

III. *History.*—
Bacon's History of Henry VII.
Hallam's Constitutional History of England.
Longman's Life and Times of Edward III.

B. A. HONOUR COURSE

For B. A. Honours, the Examination will be on the Honour Course of the Third Year and the Lectures of the Fourth Year in addition to the following course :—

I. *Language* :—

Klipstein's Anglo-Saxon Grammar.
Thorpe's Analecta Anglo-Saxonica.
Marsh's Lectures on English Language, by Smith.
Craik's Outlines of the History of the English Language.
Tyrwhitt's Essay on the Language and Versification of Chaucer.

II. *Literature*.—

Required from the Student a general acquaintance with the works of the English Classical Authors, and a more minute study of the following portions of English Literature :—

Shakespeare's Plays.
Chaucer—Canterbury Tales ; The Prologue and the Knight's Tale ; the Flower and the Leaf ; the House of Fame.
Spencer.—Falrie-Queen ; Books I., II.
Marlowe.—Faustus and Jew of Malta.

Required to be read in connection with this part of the Course :—

Craik's History of English Literature.
Hallam's Literary History of Europe—the parts relating to English Literature.
Johnson's Lives of the Poets.
Dunlop's History of Fiction.

III. *History*.—

Required a general acquaintance with the History of England to the year 1714, and a more minute knowledge of the Anglo-Saxon period, of the 13th and 14th centuries, and of the period from the accession of Elizabeth to that of George I.

The following books are recommended :—

Kemble's Saxons in England.
Lappenberb's England under the Anglo-Norman Kings.
Pauli's Life of Alfred the Great.
Froude's History of England.
Macaulay's History of England.
Clarendon's History of the Rebellion.

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4. MATHEMATICS AND PHYSICS.

MATHEMATICS.—(*First Year.*)—McDowell's Exercises on Modern Geometry, &c—Wood's Algebra—Todhunter's Theory of Equations.

MATHEMATICS.—(*Second Year.*)—Hind's Plane and Spherical Trigonometry.—Salmon's Conic Sections, first thirteen chapters.—Williamson's Differential and Integral Calculus (selected course).

MATHEMATICAL PHYSICS.—(*Third Year.*)—Minchin's Statics, (omitting Chapter 14).—Tait & Steele, Dynamics of a Particle.—Besant's Hydromechanics,

Chaps. 1, 2, 3, 5. —Walton's Mechanical and Hydrostatical Problems.—Parkinson's Optics.—Main's Practical and Spherical Astronomy, (selected course.)

B. A. HONOUR COURSE.

PURE MATHEMATICS.—Hind's Plane and Spherical Trigonometry.—Todhunter's Theory of Equations.—Hall's Differential and Integral Calculus.—Boole's Differential Equations (selected course.)—Gregory's Examples of the Calculus (omitting the last two Chapters).—Salmon's Conic Sections.—Salmon's Geometry of three Dimensions (selected course).

MECHANICS.—Todhunter's Statics.—Tait & Steele, Dynamics of a Particle —Routh's Dynamics of a Rigid Body.—Besant's Hydromechanics.—Walton's Mechanical Examples.—Walton's Examples in Hydrostatics.

ASTRONOMY.—Main's Astronomy.—Sir John Herschel's Outlines of Astronomy (Part II. The Lunar and Planetary Perturbations.)—Godfray's Lunar Theory.

Newton's Principia Lib. I., Sects. 1, 2, 3, 9, and 11.

LIGHT.—Lloyd's Wave Theory of Light,

HEAT,
ELECTRICITY,
MAGNETISM,
ACOUSTICS,
} As in ordinary course.

The examinations for B. A. Honours will continue *four* days.

The examination for Honours in the other years will continue *two* days, Engineering students may be candidates for Honours.

COURSE FOR THE ANNE MOLSON MATHEMATICAL PRIZE.

The Mathematical Physics of the Honour Course in the Third Year.—

The value of the prize is about $64. It is open for competition to Third Year Students in April 1879.

5. NATURAL HISTORY AND GEOLOGY.

Third Year.—Mineralogy and use of the Blowpipe. Lithology. Elementary course of Chronological Geology. Text-Books :—Dana's Mineralogy and Synopsis by the Professor.

Fourth Year. The Lectures will include :—

1. An advanced course in Lithology, General Geology and Palæontology, in with which the Students will be required to read Dana's Geology and Lyell's Student's Elements.

2. Canadian Geology, in connection with which the Students will read Reports of the Geological Survey of Canada, and Dawson's Acadian Geology.

3. Practical Exercises and instruction in the methods of Observation and of conducting Geological Explorations, and in the study of Palæontology. Text-

books :—Von Cotta on Ore Deposits, and Nicholson's Palæontology. Excursions for Field-work when practicable.

In addition to the above, the student is required to pass an examination in any one of the following subjects :—

1. Canadian Botany, as in Gray's "Text-Book," and "Manual," and speciments illustrative of these books from the Museum.

2. Zoology and Palæontology of Canada, as in Dawson's Hand-book and Billings' Palæozoic Fossils, with specimens from the Museum.

3. Mineralogy as in Dana, with specimens from the Museum.

Candidates for Honours will be expected to attain to such proficiency as to be able to undertake original investigations in some at least of the subjects of study. Students in the Faculty of Applied Science may be Candidates for Honours.

Lectures in the Undergraduate Course in the Faculty of Arts.

SESSION OF 1878-9

FIRST YEAR.

Hours.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
9	Classics.	* French.	* French : † Mathematics.	* French.	Mathematics.
10	Mathematics.	Classics.	Classics.	Classics.	Classics.
11	English.	† Mathematics.	English.	† Mathematics.	English.
12	Elementary Chemistry.	* German : * Hebrew.	Mathematics.	* German : * Hebrew.	Elementary Chemistry.
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SECOND YEAR.

9	* French.	Mathematics.	* German.	Mathematics.	* French.
10	Classics.	Botany.	Logic.	Botany.	* German : † Mathematics.
11	Logic.	Classics.	† Mathematics.	Classics.	Classics.
12	† Mathematics.	* Hebrew.	* French.	* Hebrew.	Logic.
1	* German.				

THIRD YEAR.

9	German (*b*): † Math. Phys.	Classics.	† Classics, † Geol : † Math. Phy.	Classics.	† Classics.
10	French, (*b*) : † Ment. Phil.	† Mental Philosophy. (*a*)	Mathematical Physics.	French. (*b*)	Moral Philosophy.
11	Math. Physics.	Zoology.	Moral Philosophy.	Zoology.	Mathematical Physics.
12	Moral Philosophy.	§ Experimental Physics.	Rhetoric.	§ Experimental Physics.	† Mathematical Physics.
1		Hebrew. (*b*)		Hebrew. (*b*)	German. [*b*]

FOURTH YEAR.

9	† Geology.	Astronomy (*a*) : German, (*b*)	† Classics.	Astronomy, (*a*) : German, (*b*)	† Geology, † Classics.
10	Geology.	† M. Phy. : French ; †Ment. Ph.	English Literature.	† Math. Phys. : † Mental Phil.	Geology.
11	Classics.	Mental Philosophy.	Classics.	Mental Philosophy.	French. (*b*)
12	German. (*b*)	§ Experimental Physics.	† Geology, † Math. Phys.	§ Experimental Physics.	
1				Hebrew. (*b*)	

(*a*) During First Term : (*b*) Optional. † For Candidates for Honours.

* The Student may take at his option French or German in the first two years, or if a Theological Student, Hebrew, § From November 1st

Classes at 1 P.M., may be changed to other hours. ‡ For Practical work.

Library open every day except Saturday, 10 to 4; Saturday 10 to 1; The Museum will be open as arranged by the Professor of Natural History.

Faculty of Applied Science.

THE PRINCIPAL *(ex-officio)*.

Professors :—GIRDWOOD, HARRINGTON, BOVEY.
Associate Professors :—LEACH, DAWSON, MARKGRAF, JOHNSON, DAREY.
Lecturers :—MCLEOD, CHANDLER.
Dean of the Faculty :—HENRY T. BOVEY, M.A., C.E.
Librarian :—Professor MARKGRAF, M.A.

The Courses of study in this Department are designed to afford a complete preliminary training of a Technical as well as a Theoretical nature, to such Students as are preparing to enter any of the various branches of the Professions of Engineering and Surveying, or are destined to be engaged in Assaying, Practical Chemistry, and the higher forms of Manufacturing Art.

Four distinct Courses of study are provided, each of which extends over four, or, under certain conditions, three years, and is specially adapted to the prospective pursuits of the Student :

(1) Civil Engineering.
(2) Mechanical Engineering.
(3) Mining Engineering.
(4) Practical Chemistry.

The Degrees conferred by the University upon such Undergraduates of this Department as shall fulfil the conditions and pass the Examination hereinafter stated will be, in the first instance, "Bachelor of Applied Science," mention being made in the Diploma of the particular course of study pursued; and subsequently the degree of "Master of Engineering" on those who have pursued Courses, 1, 2 or 3, and of "Master of Applied Science" on those who have pursued Course 4.

Examinations for Provincial Lands Surveyors :—Any Student who has received the degree of Bachelor of Applied Science in the Course of Civil Engineering and Land Surveying may be received as an apprentice by any Land Surveyor in Quebec or Ontario, and shall be holden to serve as such apprentice for only one year. He must, however, pass the preliminary and final examinations before one of the Boards of Examiners. The former examination should be passed before entrance into the Faculty or during the First and Second Years of attendance.

Examinations for Dominion Lands Surveyors :—Students in the Course of Civil Engineering will receive the necessary preparation for the Examinations for *Dominion Land Surveyors* as printed in the "*Dominion Lands Acts.*"

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§ I. MATRICULATION AND ADMISSION.

1. Candidates for Matriculation must present themselves for examination on the 17th of September, 1878. They may, however, be admitted at a later period of the Session, upon special application, if qualified to take their places in the classes in progress.

FOR ENTRANCE INTO THE FIRST YEAR, the subjects for examination will be :—

Mathematics.—Arithmetic ; Algebra, to end of Simple Equations ; Euclid's Elements, Books I., II., III.
English.—Grammar and Composition.

2. *The full Course will extend over a period of FOUR years, but Candidates may enter the SECOND year, and thus reduce the course to THREE years*, if competent to pass a satisfactory examination in the following subjects ;

Algebra,—including Arithmetic, Quadratics, Progressions, and the Binomial Theorem.
Euclid :—Books I., II., III., IV., and VI., and the definitions of Book V.
Plane Trigonometry,—including solution of Triangles.
Chemistry,—Inorganic, as in Wilson's Elements.
English :—Grammar and Composition.
French or *German*.—(French as in De Fivas' Grammaire des Grammaires as far as Syntax and easy Translation ; German as in Schmidt's German Guide, Part I), and easy Translation).

Candidates unable to pass the Chemistry, French, or German, may be allowed by the Faculty to enter, and to take the First Year lectures on Chemistry and German.

3. Occasional Students may be admitted to the Professional Classes upon payment of special fees (§ VII).

Undergraduates in Arts may, if allowed by the Faculty of Arts, be admitted to the Professional Classes in Practical Science on payment of the fees for these classes.

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§ II. EXHIBITIONS AND PRIZES.

THE SCOTT EXHIBITION.

Founded by the Caledonian Society of Montreal, in Commemoration of the Centenary of Sir Walter Scott.

1. One Exhibition of $66 on this Endowment will be offered for competition at the opening of the Session of 1878-9 to Students entering the Fourth Year.

Subjects of Examination :—Report on some Engineering work to be selected by the candidate, English Grammar (Bain's),—English Composition,—Hallam's Middle Ages, Chaps, VIII and IX,—English Literature,—Johnson's Lives of the Poets.

2. Prizes will be awarded after each Sessional Examination to such Matriculated Students as have passed the Examination in all the subjects of one of the regular Courses of study, and have taken the first place in the Examinations in one of the subjects.

§ III. COURSES OF STUDY FOR THE SESSION 1878-79.

FIRST YEAR.

Civil Engineering.	Mechanical Engineering.	Mining Engineering.	Practical Chemistry.
Arithmetic. Euclid.	Arithmetic. Euclid.	Arithmetic. Euclid.	Arithmetic. Euclid.
Algebra. Trigonometry.	Algebra. Trigonometry.	Algebra. Trigonometry.	Algebra. Trigonometry.
Geometrical Conics.	Geometrical Conics.	Geometrical Conics.	Geometrical Conics.
Solid Geometry.	Solid Geometry.	Solid Geometry.	Solid Geometry.
Geometrical Drawing (Optional.)	Geometrical Drawing (Optional).	Geometrical Drawing (Optional).	Geometrical Drawing (Optional).
Freehand Drawing.	Freehand Drawing.	Freehand Drawing.	Freehand Drawing.
Chemistry.	Chemistry.	Chemistry.	Chemistry.
English.	English.	English.	English.
French or German.	French or German.	French or German.	French or German.

SECOND YEAR.

Mechanism.	Mechanism.	Mechanism.	Practical Chemistry.
Surveying.	Surveying.	Surveying.	
Geometrical Drawing.	Geometrical Drawing.	Geometrical Drawing.	Geometrical Drawing.
Analytical Geometry.	Analytical Geometry.	Analytical Geometry.	
Calculus.	Calculus.	Calculus.	
Sphl. Trigonometry.	Sphl. Trigonometry.	Sphl. Trigonometry.	
Mathematical Physics.	Mathematical Physics.	Mathematical Physics	Mathematical Physics.
Experimental Physics.	Experimental Physics.	Experimental Physics.	Experimental Physics.
Zoology.	Mechanical Work.	Zoology.	Botany.
English.	English.	English.	English.
French or German.	French or German.	French or German.	French or German.

THIRD YEAR.

Applied Mechanics.	Applied Mechanics.	Applied Mechanics.	Practical Chemistry.
Materials.	Materials.	Materials.	Assaying.
Surveying.	Machinery & Millwork	Mining.	Blowpipe Analysis.
		Analytical Chemistry,	Mineralogy.
Drawing.	Drawing.	Blowpipe Analysis.	
Calculus.	Calculus.	Drawing.	
Mathematical Physics.	Mathematical Physics.	Calculus.	
Experimental Physics.	Experimental Physics.	Mathematical Physics	Mathematical Physics.
Geology.	Mechanical Work.	Experimental Physics.	Experimental Physics.
French or German.	French or German.	Geology & Mineralogy	Zoology.
		French or German.	French or German.

FOURTH YEAR.

Applied Mechanics.	Applied Mechanics.	Assaying.	Practical Chemistry.
Structures in Stone.	Machinery & Millwork	Ore Dressing.	Metallurgy.
" Timber.	Metallurgy of Iron.	Metallurgy.	Mineralogy.
" Iron.		Geology (advanced).	Geology.
Hydraul. Engineering.	Hydraul. Engineering.	Hydraul. Engineering.	
Steam Engine.	Steam Engine.	Steam Engine.	
Materials.	Materials.	Materials.	
Designs.	Designs.	Designs.	
Estimates. Specificat.	Estimates. Specificat.	Estimates. Specificat.	French or German. *
French or German. *	French or German.*	French or German.*	

N.B. (1) Students in the 2nd, 3rd and 4th years will, in addition to the above, attend a series of lectures on some special departments of Engineering. The subjects for next Session will be Road Making and Sanitary Engineering.

(2) During the summer recess, the Students in the 2nd, 3rd and 4th years are to employ themselves in some mechanical work or on some public work ; and they are also to prepare a report on such work, to be handed in at the beginning of the ensuing Session.

(3) Students are not allowed to take subjects which do not form part of their course, without the sanction of the Faculty.

* Modern languages not imperative in the fourth year.

§ IV. EXAMINATIONS.

I. FOR THE DEGREE OF BACHELOR OF APPLIED SCIENCE.

There will be a Christmas Examination for Students of the First Year in all the Subjects, and for Students of the following years, in those Subjects which they take in the Faculty of Arts. A Sessional Examination will be held at the end of each Year.

Candidates must pass the Sessional Examinations of the First Second and Third Years, or, if admitted in the Second Year, of the Second and Third Years. They must also pass a Final Examination at the end of the Fourth Year.

Graduates in Civil Engineering of this University may obtain the Degree of Bachelor of Applied Science in exchange for that which they at present hold, upon application to the Corporation through the Registrar, and upon payment of a fee of $3.

II. FOR THE DEGREE OF MASTER OF ENGINEERING.

Candidates must be Bachelors of Applied Science of at least three years' standing, and must produce satisfactory certificates of having been engaged during that time upon *bona fide* work in either the Civil, Mechanical, or Mining Branch of Engineering.

They must pass with credit an Examination, which will extend over the general Theory and Practice of Engineering, in which papers will be set having special reference to that particular branch upon which they have, during the three preceding years, been engaged.

The Examination will be held once in each year, in the second week of the month of December, and will be partly written and partly *viva voce*.

Notice of the intention of a Candidate to offer himself at any Examination for this degree must be sent in, together with the necessary certificates and fees, not less than two calendar months before each Examination is be held.

III. FOR THE DEGREE OF MASTER OF APPLIED SCIENCE.

Candidates must be Bachelors of Applied Science of at least three years' standing, must present certificates of having been employed during that time under competent guidance in some branch of scientific work, and must pass with credit an Examination

in the Theory and Practice of those branches of scientific work in which they may have been engaged. The other conditions as under the last heading.

Undergraduates in Arts of the Second or Third Years, or Graduates of any University, entering the Faculty of Applied Science, may at the discretion of the Professors be exempted from such lectures in that Faculty as they may have previously attended as Students in Arts, but must pass all of the examinations.

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§ V. ATTENDANCE AND CONDUCT.

The regulations under this head are in all respects the same as those in force for Undergraduates in Arts.

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§ VI. LIBRARY AND MUSEUM,

Students in this Department will have the same privileges with reference to the Library and Museum as Undergraduates in Arts.

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§ VII. FEES.

In the Course of Civil Engineering.—$45 ; Library, $4. In all $49 for each Session.

In the Course of Mechanical Engineering.—$45 ; Library, $4. In all $49 for each Session.

In the Course of Mining Engineering.—1st Year, $45 ; 2nd, 3rd and 4th Years, $55 ; Library, $4. In all $49 to $59 for each Session.

In the Course of Chemistry.—1st Year, $45 ; 2nd, 3rd and 4th Years, $55 ; Library, $4. In all $49 to $59 for each Session.

Matriculation Fee, for the First Year, (to be paid in the year of entrance only) $4 ; for the Second Year, (exigible from Students who enter in the Second Year, and also from those who have failed in the First Year, and re-entered the Second Year on Examination) $6.

Fee for Degree of Bachelor of Applied Science.—$10.

Fee for Degree of Master of Engineering or Master of Applied Science.—$50.

The above fees are subject to certain abatements in the case of Graduates in Arts and of Students holding exemption Scholarships in Arts. (See Announcement of the Faculty of Arts).

Laboratory Students are required to purchase their own chemicals, &c. The larger articles of apparatus will be supplied by the Laboratory, the Students paying $6 per Session for their use, and being responsible for breakage.

Occasional Students may be admitted to the Professional Classes in any year, but will be required to pay $20 in addition to the ordinary fee for that year, and $5 for entrance and use of the Library.

Students taking Blowpipe Analysis when it does not form part of their course are required to pay a fee of $5.

Occasional Students may attend the course of Instruction in Meteorology on paying a fee of $5.

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§ VIII. COURSES OF LECTURES.

1. CIVIL ENGINEERING AND APPLIED MECHANICS.

Professor :—HENRY T. BOVEY, M.A., C.E.

Civil Engineering.

The course of instruction in Civil Engineering will include the following :—Earthwork, Masonry, Carpentry, Structures of Timber, Stone and Iron, the Construction of Common Roads, Rail Roads, Bridges, Viaducts, Tunnels, Canals, River, Harbour and Sea Works, Drainage Works, Lighthouses, Works connected with Irrigation and Water Supply, &c.

Applied Mechanics.

The lectures in Applied Mechanics will embrace the following subjects :—Principles of Mechanism, Work, Inertia, Energy, Structures (simple and complex), Strength, Stiffness and Resilience of Materials, Trussed Structures, Beams or Girders, Pillars, Shafts, Arches, Earthwork, Water Power and Wind Power, Pressure Engines, Water Wheels, Turbines, Centrifugal Pumps, Pneumatics.

The Students of the above and two following courses will also prepare designs, specifications, and estimates for such works as are usually undertaken by the Engineer.

Each Student works independently under the personal supervision of the Professor, and makes such drawings and calculations as would be needed were the structure designed to be actually carried out.

Instruction will be given in :—

(*a*). The drawing of parts of machines from given dimensions.

(*b*). The use of geometrical drawing in arranging and designing the parts of machines, and the methods of working out various mechanical problems graphically.

(*c*). The designing of bridges, machines and engineering structures generally.

(*d*). The taking out of quantities and the making of estimates from drawing.

II. MECHANICAL ENGINEERING.

Professor BOVEY and Lecturer MCLEOD.

Students of this course will receive a series of lectures on Machinery and Millwork ; and such Students will be required to avail themselves of opportunities for practical training in shops or works recognized by the University, and to do satisfactory work therein, credit for which will be given in the certificates.

N.B. Steps are being taken to provide for the erection of workshops, so that Students may be enabled to receive practical instruction during the progress of their theoretical studies.

III. MINING ENGINEERING.

Professor.—B. J. HARRINGTON, B.A., PH.D.

The object of this course is to give Students a knowledge of the characters and mode of occurrence of various economic minerals, together with the methods employed for their extraction and subsequent treatment.

Among the subjects taken up the following may be mentioned : Blasting and the nature and use of different Explosives, Quarrying, Hydraulic Mining, Boring, the Sinking, Timbering, and Tubbing of Shafts, Driving and Timbering of Levels, Underground Conveyance and Hoisting, Drainage and Pumping, Lighting and Ventilation of Mines, special methods of Exploitation employed in the working of Metalliferous Deposits or of Coal Seams, Ore Dressing, &c.

In the Fourth Year a course of lectures on Metallurgy is given, and assays are made of various Ores, Fuels, &c. In the third year also, instruction is given in Blowpipe Analysis, the object of which is to enable Students by means of the blowpipe and a few simple reagents to detect the nature of different Minerals or Ores. On account of the small amount of apparatus required, and the rapidity with which accurate results may be arrived at, a knowledge of this subject will be found most useful to those engaged in geological or other field-work.

IV. SURVEYING AND DRAWING.

Lecturer.—C. H. MCLEOD, Ma.E.

The object aimed at in this Course is to afford the Student such instruction as will enable him to be of immediate service upon entering the office of the Engineer, or of the Surveyor ; and the Lectures embrace the general principles of this important branch of Engineering, discussed under the heads of Chain and Angular (including Geodetic) Surveying and Levelling, as applied to ordinary as well as special operations in the Field.

In addition to the Lectures, a thorough course of Engineering Field-work, in accordance with the subjoined scheme, is performed by the Class, during which the practical operations of the Engineer in the field are actually carried out by the Students.

The Instruction in Practical Surveying comprises :—

1. The Surveying of a tract of country with the chain only, and the methods of keeping Surveyor's note-books.

2. The use of the Transit, Theodolite, Level, Sextant and other Field Instruments.

3. Surveying by angular measurements.

4. Contour Surveying.

5. The Location of a line of road, including the making of preliminary surveys, the ranging of Curves, the tracing, levelling and setting out of the line selected.

6. An Hydrographic Survey, during the progress of which the various methods employed in Marine Surveying are fully illustrated.

There will be a course of Lectures on Geometrical Drawing, and a course of Practical instruction in Drawing, comprising :—

1. The construction of Plane Figures.

2. Orthographic and Isometric Projection.

3. The projection of Shades and Shadows.

4. Perspective Projection.

5. The making of Maps and Sections of Tracts of Country from notes taken in the field.

V. CHEMISTRY.

Lecturer :—B. J. HARRINGTON, B.A., PH.D.

A course of forty-five lectures illustrated by experiments is given to all Students of the First Year on the properties and preparation of the Non-Metallic and Metallic Elements, and many of their compounds, the laws of chemical combination by weight and volume, the Atomic Theory, Chemical Formulæ and Equations, characteristics of Acids, Bases and Salts, Compound Radicals, &c.

In the Second Year additional instruction will be given to Students of the Mining and Chemistry Courses in the construction of apparatus, preparation of gases, &c.

VI. PRACTICAL CHEMISTRY.

Professor :—GILBERT P. GIRDWOOD, M.D.

This course will be conducted in the Laboratory of the Medical Faculty and will be specially designed for Chemistry Students of the Third and Fourth Years. It will include instruction in the methods of Qualitative and Quantitative Analysis of Inorganic and Organic Bodies, Fractional Distillation, determination of Boiling Points, Melting Points, &c.

Students taking these subjects are supposed to have already obtained in the earlier years of their course, a preliminary knowledge of the use of the Balance, Determination of Specific Gravities, Construction of Apparatus, Preparation of Gases, &c.

VII. GEOLOGY.

Professor :—J. W. DAWSON, LL.D., F.R.S. (Logan Professor of Geology.)
Assistant Professor.—B. J. HARRINGTON, B.A., Ph.D.

Second Year :—A preliminary Course in Zoology, with special reference to Fossil Animals.

Third Year :—Mineralogy, Lithology, Physical and Chronological Geology. and Palæontology, Geology of Canada, Methods of Geological Exploration.

Fourth Year (Mining Students only) :—Special Studies in Mineralogy and Lithology, Advanced Course in General Geology and Palæontology and Geology of Canada, Practical Geology and Field-work.

VIII. MATHEMATICS AND MATHEMATICAL PHYSICS.

Lecturer.—G. H. CHANDLER, B.A.

The lectures in this course are specially designed to meet the requirements of Students of Applied Science; those in Mechanics being introductory to Applied Mechanics. The subjects are as follows :—

Arithmetic, Euclid, Algebra, Geometrical and Analytical Conics, Plane and Spherical Trigonometry, Calculus, Elementary Astronomy and Optics, Statics, Dynamics of a Particle, Dynamics of a Rigid Body (Elementary), Hydromechanics.

The lectures on Spherical Trigonometry, Astronomy and Optics are intended to give the Students a sufficient knowledge of these subjects to enable them to pass the Government Examinations for Dominion Land Surveyors.

IX. EXPERIMENTAL PHYSICS.

Professor.—ALEXANDER JOHNSON, LL.D. (Peter Redpath Professor of Natural Philosophy).

The lectures will embrace 1 :—*Light*.—Theories.—Reflection.—Refraction.—Dispersion.—Interference and Diffraction.—Double Refraction.—Polarisation. 2 :—*Heat*.—Dilatation of Solids, Liquids and Gases.—Specific and Latent Heat.—Radiation and Conduction.—Mechanical Theory of Heat. 3 :—*Electricity*.—Statical and Dynamical; including Electro-Magnetism.—Magneto-Electricity.—Thermo-Electricity.—Diamagnetism.—Electric Measurements.—Practical Applications to Telegraph, &c. 4.—*Magnetism*. Text Book: Ganot's Treatise on Physics, translated by Atkinson.

X. ENGLISH LANGUAGE AND LITERATURE.

Professor.—VEN. ARCHDEACON LEACH, D.C.L., LL.D. (Molson Professor of English Language and Literature).

English Language and Literature :—Text-Books :—Bain's English Grammar; Spalding's History of English Literature.

XI. FRENCH OR GERMAN.

French :—Professor P. J. Darey, M.A., B.C.L.
German :—Professor C. F. A. Markgraf, M.A.

Students of this Faculty are required to take the course in one of these languages provided by the Faculty of Arts.

XII. METEOROLOGY.

Superintendent of Observatory, C. H. McLeod, Ma.E.

Instruction in Meteorological Observations will be given in the Observatory, at hours to suit the convenience of the senior students.

Certificates will be granted to those Students who attain sufficient proficiency in the methods of observation.

§ IX. LIST OF TEXT-BOOKS.

Engineering :—Rankine's Civil Engineering, Rankine's Machinery and Millwork, Rose's Complete Practical Machinist,

Applied Mechanics :—Rankine's Applied Mechanics, Downing's Hydraulics, Goodeve's Elements of Mechanism, Willis' Principles of Mechanism.

Surveying :—Gillespie's Land Surveying.

Drawing :—Davidson's Linear Drawing, Davidson's Orthographic and Geometric Projection, Davidson's Perspective Projection.

Geology :—Dana's Geology, Dana's Mineralogy, Dawson's Handbook of Zoology, Nicholson's Paleontology, Geological Survey Reports, Dawson's Acadian Geology.

Blowpipe Analysis :—Brush's Determinative Mineralogy and Blowpipe.

Mathematics :—Todhunter's Euclid, Barnard Smith's Algebra, Snowball's Trigonometry, Besant's Geometrical Conic Sections, Hann and Young's Analytical Geometry, Williamson's Differential and Intregal Calculus, Goodeve's Principles of Mechanics.

LECTURES IN THE FACULTY OF APPLIED SCIENCE.

SESSION 1878-79.

YEARS.	HOURS.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
FIRST YEAR.	9		French and German.	French.	French and German.	Mathematics.
	10	Mathematics.				
	11	English.		English.		English.
	12	Chemistry.	Mathematics.	Mathematics.	Mathematics.	Chemistry.
	1					
	2	Drawing.		Drawing.		Drawing.
	3	do		do		do
	4	do		do		do
SECOND YEAR.	9	French.		German.		French,
	10	German.			Mathematics.	German.
	11	Math. Physics	Zoology.	Math. Physics	Zoology.	Math. Physics
	12		Exp. Physics.	French.	Exp. Physics.	
	1					
	2	Surveying. & Materials.	Pract. Mach. & Mechanism.	Surveying.	Surveying. & Materials.	Pract. Mach. & Mechanism
	3	Drawing.	Drawing.	Drawing.	Drawing.	Drawing.
	4	do	do	do	do	do
THIRD YEAR.	9			Geology.*		
	10	Geology.		Mathematics.		Geology.
	11	French.	German.		German.	French.
	12	Math. Physics	Exp. Physics.	Geology.	Exp. Physics.	Math. Physics
	1					
	2	Machinery. Anal. Chem.	App. Mech.	Drawing. Blowpiping	Machinery. Anal. Chem.	App. Mech.
	3	Surveying.	Drawing.	Drawing.	Surveying.	Drawing.
	4	Drawing.	Mining.	do	Drawing.	do
FOURTH YEAR.	9	Geology.*	Design., &c.	Design., &c.	Design., &c.	Geology.*
	10	Design., &c.	do	do	do	
	11	do	do	do	do	
	12	do	do	do	do	
	1					
	2	Assaying.		do	Assaying.	
	3	Mech. Work	Construction. Steam Engine	do	Mech. Work	Construction. Hydraulics.
	4			Ore-dressing. Metallurgy.		

* For Mining Students only.

Field work for 2nd and 3rd years on Mondays, Wednesdays and Fridays during September and October.

Faculty of Medicine.

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The Principal, (ex-officio.)

Professors :—Campbell, Scott, Wright, Howard. McCallum, Craik, Fenwick,

Professors :—Drake, Girdwood, Ross, Osler, Roddick, Godfrey, Gardner.

Dean of the Faculty.—G. W. Campbell, A.M., M.D., LL.D.

Registrar.—W. Osler, M.D.

Demonstrator.—Francis J. Shepherd, M.D.

Asst. Demonstrator and Curator of Museum.—R. L. MacDonnell, B.A., M.D.

The forty-sixth Session of the Medical Faculty of McGill University will be opened on Tuesday, October 1st, 1878, with a general Introductory Lecture at 11 a.m. The regular lectures will begin on Wednesday the 2nd Oct., at the hours specified in the time-table, and will be continued during the six months following.

The Medical College, a large and substantial building situated within the University Grounds, contains three spacious class rooms, Students' waiting-room, Library, Museum, Laboratories, together with a large and well furnished Dissecting-room.

The class tickets for the various courses are accepted as qualifying candidates for examination before the various Colleges and licensing bodies of Great Britain and Ireland, and the College of Physicians and Surgeons of Ontario.

To meet the circumstances of the General Practitioners in British North America, where there is no division of the profession into Physicians and Surgeons exclusively, the degree awarded upon graduation is that of "Doctor of Medicine and Master of Surgery," in accordance with the general nature and character of the curriculum, as fully specified hereafter. The degree is received by the College of Physicians and Surgeons of the Province of Quebec.

I.

MATRICULATION.

(*a*) *University Matriculation Examination.*

This examination is the same as that recommended by the Medical Council of Great Britain. Examinations in conformity therewith, will be held the last Saturday in March and the first Saturday in October of each year. Applications may be made to the Registrar of the Faculty till the evening of the previous day. The requirements of the standard for Matriculation are :—"Compulsory—"English Language, including grammar and composition; Arith-"metic, including vulgar and decimal fractions; Algebra, including "simple equations; Geometry, first two books of Euclid; Latin, "translation and grammar;—and one of the following optional "subjects :—Greek, French, German, Natural Philosophy, including "mechanics, hydrostatics, and pneumatics."

TEXT BOOKS.—Latin, Cæsar, Commentaries, Bk. I. or Virgil Æneid Bk. I.

GREEK.—Xenophon Anabasis Bk. I. or equivalent.
FRENCH.—Charles XII., Two Books.
Natural Philosophy. Ganot's Physics.

Graduates in Arts of recognized Universities are not required to submit to the Matriculation Examination, and a certificate of having passed this Examination before the College of Physicians and Surgeons of Ontario or of Quebec will be accepted by this University.

Students of the Provinces of Quebec and Ontario are required by the laws of those Provinces to pass the matriculation examinations of the provincial Medical Boards. In Ontario, Graduates in Arts are exempted from this examination.

(*b*) *Matriculation Examination of College of Physicians and Surgeons of the Province of Quebec.*

The subjects of examination are as follows :—

Compulsory Subjects :—English, French, Latin, Arithmetic, Algebra, Euclid, History, Geography, Belles-Lettres.

Optional Subjects :—Candidates can select any one of the following subjects :—Greek, Natural and Moral Philosophy.

The Examinations will be held this year, on the 2nd of May, at Montreal, and again upon the 19th of September, at Quebec. Applications to be made to Dr. Dagenais, Montreal, or Dr. Belleau, Quebec.

Examination Fee, ten dollars. Should the candidate be unsuccessful, one half the fee will be returned.

Of the four years study *after* having passed the Matriculation Examination, three six months' sessions, at least, must be attended at a University, College, or Incorporated School of Medicine, recognized by the "Provincial Medical Board," and the first session must be attended during the year immediately succeeding the Matriculation Examination.

(*c*) *Matriculation Examination of the College of Physicians and Surgeons of the Province of Ontario.*

The examination is held in Toronto and in Kingston on the first Tuesday and Wednesday after Good Friday, and the third Tuesday and Wednesday in August of each year. It is compulsory upon all Students of the Province of Ontario.

The subjects are as follows :—English Language, including grammar and composition ; Arithmetic, including vulgar and decimal fractions ; Algebra, including simple equations ; Geometry, first two books of Euclid ; Latin, translation and grammar ; and upon

one of the following subjects (of which Students are recommended to select either Natural Philosophy, or one of the Modern Languages), the candidate having the option of naming the subject upon which he will be examined, viz.,—Greek, French, German, Natural Philosophy, including mechanics, hydrostatics and pneumatics.

Text Books.—Where more than one is named, the candidate may select one upon which he will prefer to be examined, viz.:

Latin—Cæsar, *Commentaries on Gallic War*, fifth and sixth Books; Cicero, *Manilian Law;* Virgil, *Æneid*, second book.

Greek—Xenophon, *Anabasis*, first book.

French, Voltaire, *Charles XII*, 6th, 7th and 8th Books.

German—Adler's Reader, first part.

Natural Philosophy—Peek's Ganot; Sangster's first Book.

Intending Students are advised to pass their Matriculation in the Spring, in order to comply with the law, which requires four full years of professional study.

II.

ENREGISTRATION.

The following are the University Regulations:—

All Students desirous of attending the Medical Lectures shall, at the commencement of each Session, enrol their names and residences in the Register of the Medical Faculty, and procure from the Registrar a ticket of Enregistration, for which each Student shall pay a fee of $4; excepting in the Clinical Classes, in which enregistration for Students of other Schools shall not be compulsory.

The said Register shall be closed on the last day of November, in each year, and no tickets obtained from any of the Professors shall be received without previous enregistration.

III.

COURSES OF LECTURES.

1 Anatomy.—[Prof. Scott.] The importance of Anatomy, both descriptive and in its relation to Medicine and Surgery, is duly con-

sidered by the Professor, who employs chiefly the fresh subject in the illustration of the lectures, aided, however, by dried preparations, wax models, plaster casts of dissections, plates, &c., the full size of life.

2 Practical Anatomy—[Drs. Shepherd and MacDonnell.]—Special attention is devoted to this important branch, the teaching being similar to that of the best European schools. The Dissecting-Room is open from 8 a.m. to 10 p.m; the Demonstrators hours are from 10 to 12 a.m., and 8 to 10 p.m. Special Demonstrations on the Brain, Thorax, Abdomen, Bones, etc., are frequently given. Every Student must be examined *at least* three times on each part dissected and if the examinations are satisfactory a certificate is given. Prizes are awarded at the end of the Session for the best examination on the fresh subject. Material provided under cost.

3 Chemistry.—[Prof. Craik.]—Inorganic Chemistry is fully treated: a large portion of the course is devoted to Organic Chemistry and its relations to Physiology. The branches of Physics bearing upon or connected with Chemistry also engage the attention of the Class. Eor experimental illustration, abundant apparatus is possessed by the Professor, among which may be enumerated, a powerful Air Pump—Oxy-Hydrogen Microscope—Polariscope—extensive series of Models of Crystals, Electrical and Galvanic apparatus, Steam engine, &c., &c.

4 Practical Chemistry.—[Prof. Girdwood.]—Thorough instruction is given in the different departments of Practical Chemistry in the Laboratory of the Faculty, under the personal supervision of the Professor. The course includes blowpipe manipulations, qualitative and quantitative analysis, toxicological investigations, &c., &c. This class may be taken in the Summer Session.

6 Institutes of Medicine.—[Prof. Osler and Assistant.]—Embraced in this course are the following classes:—

(*a*) **Physiology,** comprising,

(1) A full course of didactic lectures upon the structure a ope, functions of the various organs of the body in health. The lect dical are illustrated by fresh preparations, diagrams, plates and m nts are and, when practicable, by experiments. s, and to

(2) Practical demonstrations, held every Saturday from 2 to 4 p.m. In this class a complete series of histological preparations is exhibited and explained. Specimens illustrative of physiological anatomy and practical physiology are also shown, and the Students invited to propound and discuss any questions which may not have appeared clear to them.

(3) Practical Histology—normal and pathological. A course of 25 lessons—Microscopes, re-agents and material provided. This course is generally held during the Summer Session, but will also be conducted during the Winter if a class of 10 Students be formed. It comprises thorough instruction in the use of the Microscope and the preparation of the tissues, each Student preparing for himself during the course a cabinet of 100 or more specimens.

(*b*) **Pathology,** comprising,

(1) A limited number of lectures on General Pathology, which are included in the systematic course on the Institutes.

(2) Pathological Demonstrations—weekly—Saturday, 11 a.m. This course is based upon, and conducted, as far as possible, in the same way as that of Prof. Virchow, at the Berlin Pathological Institute. Specimens of all kinds are collected throughout the week, kept fresh until Saturday and then brought before the class when practical comments are made upon them. An idea of the amount of material at command may be gathered from the fact that over 150 fresh pathological specimens, illustrative of almost all the common forms of disease, were laid before the class during the past session.

(3) Instruction in Post-mortems—The Autopsy Room of the General Hospital is in charge of the Professor, and the post-mortems are performed by the Students in rotation under his supervision. System and thoroughness in inspection are insisted upon, the method followed being that of Virchow. As far as possible, attention is drawn to the Medical Anatomy of the thoracic and abdominal organs. In connection with this class, aided by the Professor of Medical Jurisprudence, two Coroner's Inquests will be conducted during the session before the class, and the Medico-legal aspects of post-mortems dwelt upon.

1 Ana
descriptive

6 Materia Medica. —[Prof. Wright] — In this course the ordinary Medicines officinal in the British Pharmacopœia are taken up in classes according to their chief actions, and described under the various heads peculiar to Pharmacology. The Therapeutics of each are fully detailed, under the effects that follow from different doses. Those from toxic or over-doses are added, together with the mode of treatment, etc. The course is illustrated from a cabinet of the various drugs and their preparations, and the plates of Wagner, Roque, Stevenson and Churchill are also shewn. Analytical experiments with the ordinary re-agents are exhibited.

7 Theory and Practice of Medicine.—[Prof. Howard] — While the lectures on this subject are mainly devoted to Special Pathology and Therapeutics, the department of General Pathology in this University being included in the Institutes of Medicine, no opportunity is lost of illustrating and explaining the *general* laws of disease. With the exception of certain affections seldom or never observed in this country, all the important diseases of the body, not described from the chairs of Surgery and Obstetrics, are discussed, and their Pathological Anatomy illustrated by the large collection of morbid preparations in the University Museum, and by fresh specimens contributed by the Demonstrator of Morbid Anatomy.

The College possesses an extensive series of Anatomical plates illustrative of the histological and anatomical appearances of disease, and the wards of the General Hospital afford the lecturer ample opportunities to refer to living examples of very many of the maladies he describes and to give the results of treatment.

8 Clinical Medicine.—[Prof. Ross]—Attendance is given in the Medical Wards of the Montreal General Hospital on three days of every week. Accurate reports of all cases are kept by duly appointed clinical clerks, and are systematically read before the class. Instruction is given by the bedside and special inducements are offered to every pupil to take part in the physical examination of patients. The mode of conducting investigations, the use of the microscope, the value of the thermometer and ophthalmoscope, etc., in Medical Diagnosis, are all explained and illustrated. Senior Students are called upon in rotation to examine new cases before the class, and to

be examined thereupon as to their general knowledge. In addition, one weekly Clinical Lecture is delivered bearing upon some case or cases of importance which may happen to be under observation at the time. Special attention is directed to Medical Anatomy, and candidates for the degree will be examined thereon.

9 Surgery.—[Prof. Fenwick,] — Divided into Principles and Practice, including Surgical Anatomy and Operative Surgery, exhibited on the subject. The various surgical instruments and apparatus are exhibited, and their uses and applications explained and practically illustrated.

10 Clinical Surgery.—[Prof. Roddick]--This course is eminently practical, consisting of bedside instruction and lectures delivered weekly, illustrative of Surgical cases actually present in the wards of the General Hospital. The class is taken charge of by the Teacher on alternate days, when the reports of the Clinical clerks are read and criticized, and fresh cases examined by the senior Students. The Surgical dressings are, as much as possible, reserved for these occasions, so as to give all present an opportunity of participating in the application of splints to fractures, dressing of wounds, minor operations, etc. Major operations are performed in the spacious theatre attached to the Hospital, which is so admirably constructed that the most distant can generally obtain a fair view of the operation. This is also used as a Lecture Room by the Clinical Professors. Within the past year some of the more recently invented appliances for the treatment of Surgical disease have been introduced into the Hospital, prominent among which is a complete outfit of Lister's Antiseptic Apparatus, so that this excellent method of treating wounds is now almost universally adopted.

11 Midwifery.—[Prof. McCallum.] — Including diseases of women and children; illustrated by a series of drawings on a large scale, by humid preparations, by models in wax, by the use of the artificial Pelvis, and by cases in the wards of the Lying-in Hospital.

12 Medical Jurisprudence.—[Prof. Gardner.] — This course includes *Insanity*, to which a good deal of attention is devoted, the subject being treated of in its Medical as well as Medico-legal aspects. One or two lectures are devoted to the treatment of insanity.

Special attention is devoted to the subject of blood stains, the Clinical, Microscopical and Spectroscopical tests for which are fully described and shown to the class. The various spectra of blood in its different conditions are shown by the Sorby-Browning Micro-spectroscope so well adapted for showing the reactions with exceedingly minute quantities of suspected material. Recent researches in the diagnosis of human from animal blood are alluded to.

In addition to the other subjects usually included in a course of this kind, Toxicology is taken up. The modes of action of poisons, general evidence of poisoning and classification of poisons are first treated of, after which the more common poisons are described with reference to symptoms, post mortem appearances, and chemical tests. The post mortem appearances are illustrated by plates and the tests are shown to the Class.

13 Hygiene and Public Health. — [Prof. Godfrey.] — A three months, course of Lectures will be delivered on this subject the attendance upon which is now compulsory.

14 Ophthalmology and Otology. — [Dr Buller]— Will include a course of lectures on diseases of the Eye and the Ear, both Didactic and Clinical. In the former the general principles of diagnosis and treatment will be dealt with ; in the latter, cases illustrative of the typical forms of ordinary diseases of these organs will be exhibited and explained to the class, and afterwards placed under the special care of gentlemen who may show themselves competent to take charge of them.

A Course of Operations on the Cadaver will be open to such Students as may wish to avail themselves of the same.

15 Botany and Zoology. — [Prof. Dawson.] — The course in Botany is illustrated by specimens, diagrams, models, and the microscope. Students have access without any additional fee to the lectures in Zoology in the Faculty of Arts, and to the Natural History Museum of the University and the Museum of the Natural History Society of Montreal.

16 Helminthology.—A course of six lectures on the Parasitic Diseases of Man and the Domestic Animals. (Prof. Osler). The life history and development of the Entozoa, together with the diseases caused by them, are fully considered. The lectures are illustrated by a series of beautiful diagrams, and by fresh and prepared specimens.

The following are extracts from the University Regulations with respect to the courses of Lectures :

1st. Each Professor shall deliver at least five Lectures during the week except in the classes of Clinical Medicine and Clinical Surgery, in which only two Lectures shall be required; and in that of Medical Jurisprudence, if extended through six months, in which case three Lectures a week will suffice.

2nd. Every Lecture shall be of one hour's duration.

3rd. Every Professor shall occasionally examine his class upon the subjects treated of in his preceding Lectures, and every such examination shall be considered a Lecture.

4th. A roll of the names of the Students attending each class shall be called from time to time.

IV.

QUALIFICATIONS FOR THE DEGREE.

The following are extracts from the Regulations respecting the qualifications of Candidates for the Degree in Medicine.

1st. No one shall be admitted to the Degree of Doctor of Medicine and Master of Surgery, who shall not either:—1st, have attended Lectures for a period of at least four six months' sessions in this University, or some other University, College, or School of Medicine, approved of by this University; or, 2ndly, have studied medicine during at least four years, and during that time have attended Lectures for a period of at least three six months' Sessions, either in this University, or some other University, College, or School of Medicine, approved of by this University.

2nd. Candidates for the final Examination shall furnish Testimonials of attendance on the following branches of Medical Education, viz :—

Anatomy.	*Of which two Courses will be required of six months' duration.*
Chemistry.	
Materia Medica and Pharmacy.	
Institutes of Medicine.	
Principles and Practice of Surgery.	
Midwifery and Diseases of Women and Children.	
Theory and Practice of Medicine.	
Practical Anatomy.	
Clinical Medicine.	
Clinical Surgery.	

Medical Jurisprudence. — *Of which one Course of six months' or two Courses of three months' will be required.*

Practical Chemistry.
Botany or Zoology.
Hygiene. — *Of which one Course will be required, of three months' duration.*

And a Course of not less than twenty-five Demonstrations upon Microscopic Anatomy, Physiology and Pathology.

Provided, however, that Testimonials equivalent to, though not precisely the same as those above stated may be presented and accepted.

3rd. The Candidate must give proof by ticket of having attended during eighteen months the practice of the Montreal General Hospital, or that of some other Hospital approved of by this University, and have compounded medicine for six months.

4th. He must also give proof by ticket of having attended for at least six months the practice of the University or other Lying-in-Hospital approved of by this University, and of having attended at least six cases of accouchement.

5th. No one shall be permitted to become a Candidate for examination who shall not have attended at least One Session of this University, and one full course of all the branches included in its curriculum.

6th. Courses of less length than the above will only be received for the time over which they have extended.

7th. Every Candidate for the Degree must on or before the Fifteenth of February, present to the Dean of the Medical Faculty testimonials of his qualifi cations, entitling him to an examination, and must at the same time deliver to the Dean of the Faculty the following Certificate :—

MONTREAL,———18—

I, the undersigned, being desirous of obtaining the Degree of Doctor of Medicine and Master of Surgery, do hereby declare that I have attained the age of twenty-one years, or (if the case be otherwise,) that I shall have attained the age of twenty-one years before the next graduation day, and that I am not (or shall not be at that time) under articles as a pupil or apprentice to any Physician Surgeon, or Apothecary. (Signed,) A. B.

8th. The trials to be undergone by the candidate shall be such as referred to under Section V.

9th. The following Oath or affirmation, will be exacted from the Candidate before receiving his degree.

SPONSIO ACADEMICA.

In Facultate Medicinæ Universitatis.

Ego, A———B———, Doctoratus in Arte Medica titulo jam donandus, Sancto coram Deo cordium scrutatore, spondeo ;—me in omnibus grati animi officiis, ergo hanc Universitatem ad extremum vitæ halitum, perseveraturum, tum porro, artem medicam, caute, caste et probe exercitaturum ; et quoad in me est,

omnia ad ægrotorum corporum salutem conducentia, cum fide procuraturum; quæ denique, inter medendum, visa vel audita silere conveniat, non sine gravi causa vulgaturum. Ita præsens mihi spondenti adsit Numen.

10th. The Fee for the Degree of Doctor of Medicine and Master of Surgery shall be twenty dollars, to be paid by the successful candidate immediately after examination, together with a Registration Fee of one dollar.

11th. The money arising from the Fees of Graduation, as well as those of Enregistration, shall be applied to the enlargement of the Medical Library and Museum, and to defraying their expenses.

V.

EXAMINATIONS.

In each class a weekly examination is held to test the progress of the Student; and in addition two or three written examinations are given throughout the Session.

The examinations at the close of each Session are arranged as follows:

1st Year—Sessional Examination.

ANATOMY.—Bones, Ligaments, Muscles, Viscera.

PHYSIOLOGY.—The Tissues, Blood, Circulation, Respiration, Digestion.

CHEMISTRY.—*Chemical Physics.*—Molecular Forces; Heat, Light, Electricity and Magnetism.

Chemical Philosophy.—Laws of Combination; Nomenclature; Symbolic Notation, Classification of Elements.

MATERIA MEDICA.—Preparation, Characters, and Adulterations of Medicines.

PRACTICAL ANATOMY.—Bones, Ligaments, Muscles, Viscera.

BOTANY.

2nd Year—Primary, Pass Examination.

ANATOMY.—

PRACTICAL ANATOMY.—

PHYSIOLOGY.—

CHEMISTRY.—

PRACTICAL CHEMISTRY.—

MATERIA MEDICA.—

3rd Year—Sessional Examination.

MEDICAL JURISPRUDENCE WITH TOXICOLOGY.

HYGIENE.*—

MEDICINE.—Classification of Diseases, Pathology of Zymotic diseases. Continued, periodical and eruptive fevers. Constitutional diseases, diseases of Kidney.

SURGERY.—Surgical Pathology, Wounds, Fractures, Dislocations.

MIDWIFERY.—Organs of generation of the female and changes in them which result from conception. Signs of Pregnancy—Diseases of Pregnancy—Pelvis and its deformities.—Mechanism of Labour.

4th Year—Final Pass Examination.

MEDICINE.—

SURGERY.—

MIDWIFERY.—

CLINICAL MEDICINE.—

CLINICAL SURGERY.—

MEDICAL ANATOMY.—

SURGICAL ANATOMY.—

By means of the above arrangement a certain definite amount of work must be accomplished in each year and, moreover, an equitable division is made between the Primary and Final branches.

It was not thought advisable that Students should *pass* finally on important subjects of the Primary branches at the end of the first year, hence the second year examination embraces the whole range of the Primary subjects, and the same holds good for the Final branches in the 3rd and 4th Year, with the exception of Medical Jurisprudence and Hygiene, which may be finally passed at the end of the 3rd Year.

The Sessional Examinations at the close of the 1st and 3rd Years are compulsory upon all Students, and they will be rated according to merit.

With regard to the Primary Examination at the end of the 2nd Year, it remains optional with the Student whether he passes in all the branches or leaves two for the 3rd Year. In any case Chemistry and one other must be taken at the close of the 2nd Year.

*—May be taken at the end of the Second Year.

VI.

MEDALS AND PRIZES.

1st. The Holmes Gold Medal, awarded to the student of the graduating class who receives the highest aggregate number of marks for the best examinations, written and oral, in both Primary and Final branches.

2nd. A prize in books awarded for the best examination, written and oral, in the final branches. The gold medallist is not permitted to compete for this prize.

3rd. A prize in books awarded for the best examination, written and oral, in the primary branches.

4th. The Sutherland Gold Medal, awarded for the best examination in Theoretical and Practical Chemistry, together with creditable examination in the Primary branches.

A prize in books for the best examination in the senior and junior Class in Practical Anatomy.

A prize in books for the best examination in Botany, and a prize for the best collection of plants.

VII.

FEES.

Lectures.

Practice of Medicine,	one course	$12.00
Clinical Medicine,	"	12.00
Surgery,	"	12.00
Clinical Surgery,	"	12.00
Obstetrics and Gynæcology,	"	12.00
Medical Jurisprudence,	"	10.00
Anatomy,	"	12.00
Institutes of Medicine (Physiology & Pathology)	"	12.00
Chemistry,	"	12.00
Chemistry, Practical,	"	12.00
Practical Anatomy,	"	6.00
Botany and Zoology,	"	5.00
Matriculation,	"	5.00
Enregistration, (each Session)	"	4.00
Degree,	"	20.00
Registration of Degree,	"	1.00

HOSPITAL FEES.

Montreal General Hospital.

Six months,	$ 8.00
Twelve months,	12.00
Perpetual,	20.00

Lying-in-Hospital.

Six months,	5.00
Summer Session,	10.00
Practical Histology, (Microscopes and reagents provided)	20.00

Any student after having paid the fees and attended two courses of any class, shall be entitled to a perpetual ticket for that class, except the following :—Practical Anatomy, Practical Histology and Practical Chemistry.

N.B.—All Fees are payable strictly in advance.

VIII.

TEXT-BOOKS.

ANATOMY.—Gray, Wilson, Sharpey and Quain.

PRACTICAL ANATOMY—Heath's and Ellis' "Dissectors," Holden's Dissector and Landmarks.

CHEMISTRY.—Fownes, Miller, Roscoe.

PRACTICAL CHEMISTRY.—Odling, Galloway, Fresenius.

MATERIA MEDICA.—Pereira's Manual by Farre, Bently and Warrington.

INSTITUTES OF MEDICINE.—*Physiology*.—Kirke's Hand-Book, Dalton, Carpenter, Huxley, Foster. *Pathology*.—Green, Rindfleish, Jones & Sieveking, (by Payne) Wilks & Moxon, Virchow on Post-Mortems, Orth's Compendium.

PRACTICAL HISTOLOGY.—Rutherford, Schäfer.

SURGERY.—Holmes' Surgery, Erichsen, Druitt, Bryant.

PRACTICE OF MEDICINE.—Aitken, Wood, Watson, Roberts, DaCosta Flint.

MEDICAL JURISPRUDENCE.—Taylor's Jurisprudence, Guy and Ferrier's Forensic Medicine. Woodman & Tidy's Handbook, Maudsley on Insanity, Shepherd's Lectures on Madness.

MIDWIFERY.—Churchill, Ramsbotham, Cazeaux, Leishman, Playfair.

HYGIENE.—Parks, Hammond, Wilson.

IX

MUSEUM.

Most of the usual Pathological specimens are collected here, obtained from Hospital and private practice. They are largely used in illustrating the lectures on Medicine and Surgery. There are also wax and papier-mache models.

Graduates of the University are invited to contribute specimens.

X.

LIBRARY.

This comprises between four and five thousand volumes, including all the standard text-books and works of reference, together with complete files of the leading periodicals. Students may obtain books on making a deposit of $4.00, which is refunded on returning the volumes.

XI.

McGILL MEDICAL SOCIETY.

This Society, composed of enregistered Students of the Faculty, meets once a week during the Summer Session and fortnightly during the winter, for the reading of papers and the discussion of medical subjects. It is presided over by a physician chosen by the members.

XII.

COST OF LIVING, &c.

This will, of course, vary with the tastes and habits of the student, but the necessary expenses need not exceed those in smaller towns. Good Board may be obtained from $15 to $20 per month. A list of Boarding-houses is prepared annually by the Secretary of the University, and may be procured from the Janitor at the Medical College.

XIII.

HOSPITALS.

Montreal General Hospital.

The Montreal General Hospital affords ample means for the instruction of Students in Clinical Medicine and Surgery. The daily number of beds occupied by patients averages from 130 to 140, and during epidemic visitations has reached a much higher

number. The Governors have also erected a Hospital for Children, contiguous to the Reid Wing of the present building. The students have thus an opportunity of becoming familiar with nearly all the diseases of suffering humanity, and with the peculiarities imparted to them by infancy, adolescence, maturity and declining age.

The large number of out-door patients that are treated in the Hospital, averaging from sixty to seventy daily—supply illustrations of most of the diseases of infants and children, of very many of the eye and skin, and of those chronic and ill-defined ailments, which, as they do not require admission to the wards of a hospital, would not otherwise come under the observation of the student, although, on account of their variety and frequency, they are of great importance to the Physician.

The large number of patients affected with diseases of the eye and ear now attending the out-door department, will afford students ample opportunity to become familiar with all the ordinary affections of those organs, and to make themselves proficient in the use of the ophthalmoscope, and it is hoped that every student will thus seek to gain a practical knowledge of this important branch of Medicine and Surgery. Operations are performed on the eye, by Dr. Buller, after the out-door patients have been seen, and students are invited to attend the same, and as far as practicable to keep such cases under observation as long as they remain in the Hospital.

The shipping contributes many examples of accidents and surgical cases.

CLINICAL CLERKS to both medical and surgical wards are appointed every three months, and each one during his term of service conducts, under the immediate direction of the Clinical Professors, the reporting of all cases in the ward allotted him. The holding of one of these offices is found to be of the greatest possible advantage to students, as affording the most real *practical* training for his future professional life. They will be awarded (on application) at the end of each session to past primary students of that year, in order of their standing in the primary examination.

DRESSERS, are also appointed to the Surgical wards and to the Out-door Department. For these appointments application is to be

made to the Professor of Clinical Surgery, and to the Out-door attending Physicians.

The Operating Room (used also for a lecture room) is so constructed as to enable the students to obtain a good view of the operations.

MONTREAL DISPENSARY,

ST. ANTOINE STREET.

About 10,000 patients yearly are treated at this Institution. The cases are of great variety, comprising a large number of pulmonary affections and children's diseases. Minor operations are of daily occurrence, and excellent practice is afforded in the application of splints and bandages. The attending Physicians furnish students with all possible facilities. The hours of attendance are from 12—2 daily.

HOTEL DIEU AND ST. PATRICK'S HOSPITAL.

Students may also attend the practice of this Charity, which contains about 170 beds.

UNIVERSITY LYING-IN HOSPITAL.

This is under the direction of the Professor of Midwifery. Students who have already attended one course of his lectures, are furnished with cases in rotation; they are advised to attend this Institution as much as possible during the Summer, when, since there are as many patients and not so many pupils as in Winter, a large proportion of cases falls to the share of each. Moreover, in this way more attention can be given to their duties during the winter.

XIV.

PAST SESSION.

The total number of students enregistered in this Faculty during the past session was 161, of whom there were from

Ontario,	90	New Brunswick,	3
Quebec,	47	P. E. Island,	4
Nova Scotia,	4	West Indies,	1

United States, 12.

The following gentlemen, 40 in number, have passed their Primary Examinations on the following subjects: Anatomy, Chemistry, Materia Medica and Pharmacy, Institutes of Medicine, and Botany and Zoology. Their names and residences are as follows :—

NAME.	RESIDENCE.
Brown, J. L.	Chesterfield, O.
Burwash, Henry J.	St. Andrew's, Q.
Butler, Billa F.	Stirling, O.
Carman, Philip E.	Iroquois, O.
Carman, John B.	Iroquois, O.
Chisholm, Murdoch	Loch Lomond, N.S.
Feader, Henry C.	Iroquois, O.
Gray, Thomas.	Brucefield, O.
Groves, George H.	Carp, O.
Gurd, David F.	Montreal, Q.
Hart, George C.	Osnabrook Centre, O.
Hanna, Franklin.	Harlem, O.
Heard, Chas. D.	Charlottetown, P. E. I.
Henwood, Alfred J.	Brantford, O.
Imrie, Andrew W.	Spencerville, O.
Inksetter, David G.	Copetown, O.
Jackson, Joseph A.	Lawrence, N. Y.
Jamieson, Chas. J.	Ottawa, O.
Lawford, John B.	Montreal, Q.
Lefevre, John M.	Toronto, O.
Lloyd, Hoyes W	Strathroy. O.
Lyford, Chas. C.	Roscoe, Ill.
McArthur, John A.	Underwood, O.
McCully, Oscar J.	Sussex, N.B.
McCullough, George.	St. Marys, O.
McEachran. William.	Montreal, Q.
McGuigan, William J.	Stratford, O.
McNee, Stuart.	Perth, O.
Menzies, John B.	Almonte, O.
Scott, John G.	Ottawa, O.
Seymour. Maurice M.	Chesterville, O.
Shaw, William F	Ottawa, O.
Small, Henry B.	Ottawa, O.
Smith, John.	Torbolton, O.
Spencer, Richmond.	Montreal, Q.
Smiley, Jonathan.	St. Lambert, Q.
Stevenson, Hans.	Wakefield, Q.
Sutherland, William R.	Montreal, Q.
Weagand, Clarence A.	Dundas Co., O.
Williston, Hedley V	Newcastle, N. B.

The following gentlemen, 27 in number, have fulfilled all the requirements to entitle them to the degree of M. D., C. M., from this University. These exercises consist in examinations both written and oral on the following subjects: Principles and Practice of Surgery, Theory and Practice of Medicine, Obstetrics and Diseases of Women and Children, Medical Jurisprudence and Hygiene,—and also Clinical Examinations in Medicine and Surgery conducted at the bedside in the Hospital:—

Beckstead, Morris	Grantly, O.
Bell, Robert	Montreal, Q.
Cameron, John D.	Glengarry, O.
Chisholm, Alexander	Lochiel, O.
Collison, Robert	Matilda, O.
Faulkner, Daniel W.	Holloway, O.
Fortier, Louis A	Philipsburg, Q.
Fraser, John R.	Hawkesbury, O.
Gardner, Henry H	Orillia, O.
Gibson, William B.	Dunham, Q.
Greenwood, Fred S.	St. Catherines, O.
Guerin, James J. E.	Montreal, Q.
Hutchinson, John A	Bluevale, O.
Howey, Wm. H.	Delhi, O.
McCann, John J. B.A.	Milbury, Mass.
McCrimmon, John	Woodville, O.
McCrimmon, Milton	Ancaster, O.
McKinley, John K	Perth, O.
McNeill, Ernest	Montague, P.E.I.
Mills, Thos. W. M.A.	Hamilton, O.
Neilson, Wm. J.	Perth, O.
Setree, Edward W	Prescott, O.
Smith, Daniel F.	Listowel, O.
Stafford, Fred.	Montreal, Q.
Vineberg, Hiram N.	Montreal, Q.
Webster, Arthur D	Kentville, N.S.
Wright, John W. B.A.	Cressy, O.

Of the above named gentlemen, Messrs. Greenwood and Gardner, are under age. They have, however, passed all the examinations and fulfilled all the requirements necessary for graduation, and only await their majority to receive their degree.

The following gentlemen have passed in Anatomy:—

Bruce L. Riordan,	Thomas Ambrose,	John E. McEvenue,
R. K. C. McCorkill,	Henry E. Poole,	

The following gentlemen have passed in Physiology :—

Thomas Ambrose,
Milton McCrimmon,
Alex. F. Pringle,
Allan F. Poaps,
Bruce L. Riordan.

The following gentlemen have passed in Chemistry :—

T. L. Browne,
F. W. Church,
John J. Church,
D. K. Cowley,
James Cahalan,
G. O. Dibblee,
Wm. Dulmage,
R. T. E. MacDonald,
R. K. C. McCorkill,
M. McNulty,
R. J. Maas,
L. D. Mignault,
A. F. Pringle,
F. W. Pulford.
E. H. Smith,
J. O. Stewart,
T. W. Serviss,
G. T. Ross,
A. M. Ruttan,
B. L. Riordan.

The following gentlemen have passed in Materia Medica :—

Thomas Ambrose,
Thos. L. Brown,
F. W. Church,
Wm. R. Dulmage,
Andrew Henderson,
R. T. E. MacDonald,
E. A. McGannon,
Louis D. Mignault,
W. J. Prendergast,
Allan M. Ruttan,
James Stewart.

Students who have passed in Botany :—

CLASS I.

E. J. Rogers, C. M. Gordon. (1st Prize.)
J. H. Carson, 2nd Prize.
W. C. Perks,
W. Moore,
S. E. Joseph,
K. McKenzie,
J. E. Heyd,
J. W. Ross,
W. L. Grey, T. W. Reynolds, (equal.)
T. A. O'Callaghan,
A. D. Struthers,
J. C. Shanks,
* N. L. Cressey,
E. Fritz.

CLASS II.

E. C. Fielde,
W. A. Shufelt,
W. H. Snow,
J. McKay,
R. B. Struthers,
J. J. Hunt,
W. J. Derby,
G. McLain,
J. B. Harvie,
W. A. Lang,
W. Cormack,
R. H. Klock,
* G. H. Parkinson,
E. Laurin,
H. A. Higginson.

CLASS III.

M. Chisholm,
T. Tupper,
H. D. Fraser,
A. H. Dunlop,
* P. Cummings,
C. Beer,
J. M. Skeffington,
* A. Harris,
G. C. Wagner,
M. R. Cuzner,
M. S. Brown,
W. H. Drummond,
A. F. Pringle,
R. Shaver,
V. Dafoe,
A. McDonald,
J. A. Jackson,
* M. Jakeman,
* E. White,

* Marked thus are Veterinary Students.

The Holmes Gold Medal was awarded to Hiram N. Vineberg, of Montreal.

The prize for the Final Examination was awarded to Thos. W. Mills, M.A., of Hamilton, Ont.

The prize for the Primary Examination was awarded to William R. Sutherland, Montreal.

The Sutherland Gold Medal was awarded to J. M. Lefebvre, of Toronto.

The following gentlemen arranged in order of merit, deserve honourable mention.

In the Primary Examination:—Messrs Lawford, J. L. Brown, Imrie, Shaw, Williston, Gurd, Stevenson, Lefevre, Gray, J. Smith, McCully and McGuigan.

In the Final Examination:—Messrs. Neilson and Gibson.

PROFESSORS' PRIZES.

BOTANY.

Rogers and Gordon, 1st. Carson, 2nd.

Special Prize for collection of Plants, Beaumont Small.

PRACTICAL ANATOMY.

SENIOR CLASS.

Prize.—JOHN B. LAWFORD.

The following gentlemen deserve honourable mention in order of merit;—Lyford, Small, Imrie, McArthur, Gray, Stevenson, Smith, J. Sutherland, Gurd and Brown, (J. L.).

JUNIOR CLASS.

Prize.—WILLIAM L. GRAY.

Honourable mention in order of merit;—Beer, Joseph, Moore, Harvie and Cormack (equal), Ross and B. E. McKenzie (equal), Rogers, Heyd and McLain (equal), Struthers, (R. B.) and Laurin (equal).

PRACTICAL CHEMISTRY.

Prize, A. D. Webster.

XV.

SUMMER SESSION.

The Classes are chiefly practical and demonstrative, and designed to supplement and extend the teaching of the regular winter Session.

The experience of the first two Sessions has been very encouraging, both in regard to the numbers in attendance, and the diligence with which the classes have been followed; and the Faculty hopes that all students will endeavour to take one or two of these extra Sessions, the fees for which have purposely been placed so low as to be almost nominal.

The special advantages of attendance upon a Summer Session are:–

(1) The benefit derived from the practical and demonstrative classes.

(2) Dresserships and Clinical Clerkships are more easily obtained at the Hospitals, and the student has more time at his disposal to follow up the cases.

(3) Cases of Midwifery are obtained in greater numbers at the Lying-in-Hospital.

(4) Systematic study can be carried out more effectively than at home.

As is only natural, the advantages offered by the city of Montreal for the practical study of Medicine and Surgery are unequalled in the Dominion. In the wards of the General Hospital there are always—and more particularly in the summer months when navigation is open—a large collection of interesting medical and surgical cases. In the out-door department there is a daily attendance of between 75 and 100 patients, which affords excellent instruction in minor surgery, routine medical practice, and diseases of children. The Eye and Ear Department, lately established, will afford to the student an opportunity of studying practically, under skilled direction, these important branches.

The Faculty has much pleasure in announcing the following prospectus.

SUMMER SESSION, APRIL 15TH TO JULY 8TH, 1878.

Clinical Instruction at Bedside. — Montreal General Hospital.....	**The Attending Physicians.**

A limited number of Dresserships and Clinical Clerkships may be obtained on application to the Attending and Out-door Physicians.— DAILY, 12-2.

Medical Clinique.—Lectures upon the Diagnosis and Treatment of cases brought into the Theatre..... TUESDAYS, 11 a.m.....	**R. P. Howard, M.D.** Prof. of Medicine.
Surgical Clinique.—Lectures upon the Diagnosis and Treatment of cases brought into the Theatre; Six demonstrations in Operative Surgery on Cadaver.—FRIDAYS, 11 a.m.....	**T. G. Roddick, M.D.** Prof. Clinical Surgery.
Diseases of Women.—Method of examining patient; use of speculum and uterine sound; disorders of menstruation; leucorrhœa, its causes and treatment; tumors of the uterus, displacements of uterus, &c., &c.—MONDAYS, 11 a.m.....	**D.C.McCallum, M.D.** Prof. of Midwifery and Diseases of Women.
Diseases of Children. — Anatomical and physiological peculiarities of infancy and childhood; infantile hygienics; modes of examination of sick children; peculiarities of symptoms; therapeutics and dosage; consideration of the more common and important diseases of childhood..... THURSDAYS, 10 am.....	**Wm. Gardner, M.D** Prof of Medical Jurisprudence.
Ophthalmic Medicine and Surgery.—Twelve didactic Lectures. Methods of Diagnosis (with Ophthalmoscopical work); injuries of the eye, and their treatment; common forms of diseases of the eye, practical instruction in operations. Twelve Clinical Lectures on cases in the Theatre..... MONDAYS, 10 a.m., THURSDAYS, 11 a.m.....	**F. Buller, M.D.** Lecturer on Ophthalmology.
Medical and Surgical Anatomy. — Demonstrations on brain; sympathetic system; thorax and abdomen; hernia, inguinal and femoral; triangles of the neck; surface markings; bladder; urethra; perineum; larynx.—FRIDAYS, 10 a.m.....	**F. Shepherd, M.D.** Demonstrator of Anatomy.
Minor Surgery.—Bandaging, application of splints, hæmostatics, catheterism, &c..... WEDNESDAYS, 10 a.m.....	**R. L. MacDonnell.** Asst. Demonstator of Anatomy.
Electro-Therapeutics.—Varieties of electricity; batteries; animal electricity and electro-physiology; electro-diagnosis; modes of application; the induced and constant current; medical diseases in which electricity is useful; electrolysis and galvanic cautery.—SATURDAYS, 10 a.m.....	**Wm. Gardner, M.D.** Prof. of Medical Jurisprudence.
Practical Pathology, consisting of twenty demonstrations in the autopsy-room of the hospital. Students will make the post-mortems in rotation, and receive instruction in the method of performing them, and keeping record of their observations.— BI-WEEKLY, 1 p.m.....	**Wm. Osler, M.D.** Prof. of Physiology and Pathology.

Practical Obstetrics. — Instruction in the diagnosis of presentations and the Clinical management of cases..... } In the Lying-in Hospital.

All students desirous of attending the above courses, will be expected to register their names with the Registrar, *within one week* after the beginning of the Session, and pay a *fee of $10*, when a ticket will be issued admitting bearer to the lectures, which ticket must be presented. Enregistration and payment of the fee is compulsory upon all students whether attending one or more of the classes.

The fees will be devoted to the extension and improvement of the Library and Museum, to which all students can obtain access.

A printed certificate of attendance will be issued at the close of the Session.

The following courses will also be conducted during the Summer, and may be taken by enregistered students.

Practical Chemistry, including blowpipe manipulation, qualitative analysis, toxicological investigations, analysis of urine, &c. This course is the same as, and may be taken in lieu of, the Sessional Course during the Winter..... *Fee, $12.*—MON., WED., and FRIDAYS, 3-5 p.m. } **G. P. Girdwood, M.D.** Prof. of Practical Chemistry.

Practical Histology, normal and pathological. A course of twenty-five lessons. Microscopes, reagents, and material provided. *Fee, $20*..... TUESDAYS, THURSDAYS, and SATURDAYS, 3-5 p.m. Extra hour for Laboratory Work, MONDAYS, WEDNESDAYS, and FRIDAYS, 5-6 p.m..... } **Wm. Osler, M.D.** Prof. of Physiology and Pathology.

Recitation Class. *Fee, $10.*

Medicine.—TUESDAY and SATURDAY, 8-9 p.m.
Surgery.—MONDAY and THURSDAY, 8-9 p.m.
Obstetrics.—WEDNESDAY and FRIDAY, 8-9 p.m.

Text Books :—Robert's Handbook of Medicine. Druit's Surgery. Leishman's Midwifery.

The following class will also be conducted by Dr. Simpson, one of the Physicians to the Out-door Department of the General Hospital.

Venereal Diseases.—Including (1) Gonorrhœa and its complications. (2) Local venereal ulcer, (Chancroid) with suppurating glands. (3) True Syphilitic Chancre, (Hunterian) and its constitutional effects. The whole amply illustrated by cases in the Out-door Department of the General Hospital.

Faculty of Law.

The Principal (Ex-officio)

Professors :—ABBOTT.
LAFLAMME.
CARTER.
TRENHOLME.
WURTELE.
KERR.

Professors :—DOUTRE
RAINVILLE.

Lecturer :—ARCHIBALD.
LARTEAU.
HUTCHINSON.
ROBIDEUX.

Dean of the Faculty.—Hon. J. J. C. ABBOTT, Q.C., D. C. L.

Acting Dean.—Professor WM. KERR, Q.C.. D. C. L.

Registrar of the Faculty.—J. S. ARCHIBALD, B.A., B.C.L.

Corporation Examiners for Degrees.—Professors N. W. TRENHOLME, M.A., B.C.L. and F. RAINVILLE, LL.B.

Matriculation Examiners of the Faculty.—Lecturers J. S. ARCHIBALD, M.A., B.C.L. and EDMOND LAREAU, B.C.L.

The Classes in Law will commence on Tuesday the First of October, 1878, and will extend to March 31st, 1879.

The Lectures of the Faculty will close on Saturday the 1st of March, 1879, and the Examinations will be held in the William Molson Hall, McGill College Building, from 3 to 6 p. m., on the 6th, 7th, 10th, 11th, 12th, 13th and 14th days of March, 1879.

The Lecture Rooms of the Faculty are situated in the Molson's Bank Chambers, in St. James Street.

The complete course of study in this Faculty extends over three years; but it may be shortened to two years, when the student matriculates in the third year of his indentures.

Students who avail themselves of the privilege of attending two years only, will nevertheless be required to pass an examination in the subjects comprised in the three years' course.

Matriculated Students who do not take the whole course are classed as Partial Students, and are not entitled to proceed to the Degree of B. C. L.

Occasional Students will be received without matriculation, for attendance on any particular series of Lectures.

Students who have completed their course of three years,—or of two years, if they have commenced in the third year of their indentures,—and have passed a satisfactory examination, will be entitled, upon the certificate and recommendation of the Faculty, to the Degree of Bachelor of Civil Law.

COURSE OF STUDY.

FIRST YEAR.

Legal History	Lecturer LAREAU.
Civil Law :—	
Persons, Property, Ownership	Professor RAINVILLE.
Roman Law :—	
Institutes of Justinian, B. I., Gaius, C. I., Maine, Chapters I. to IV.	Professor TRENHOLME.
Civil and Commercial Laws :—	
Obligations	Professor WURTELE.
Civil Procedure :— Introduction.	Professor DOUTRE and Lecturer HUTCHINSON.
Criminal Law :—	Lecturer ARCHIBALD.

SECOND YEAR,

Legal Bibliography	
Civil Law :— Rents, Transaction, Suretyship	Lecturer LAREAU.
Civil Law :— Usufruct, Real Servitudes, Gifts and Wills, Substitutions	Professor RAINVILLE.
International Law	
Civil and Commercial Law :— Sales	Professor KERR.
Roman Law :— Institutes of Justinian, B. II. and B. III. to Title 14, Gaius, Chaps. II. and III., Maine, Chapters V. to VIII.	Professor TRENHOLME.
Commercial Law :— Partnership, Corporations, Bills of Exchange	Professor WURTELE.
Civil Procedure :— First Part	Professor DOUTRE and Lecturer HUTCHINSON.
Criminal Procedure :—	Lecturer ARCHIBALD.

THIRD YEAR.

Civil Law :—	
Privileges and Hypothecs	Lecturer LAREAU.
Prescription	
Imprisonment in Civil Cases	
Civil Law :—	
Successions	Professor RAINVILLE.
Marriage Covenants	
Dower	
International Law	Professor KERR.
Commercial Law :—	
Carriage of Persons	
Insurance	
Bottomry and Respondentia	
Roman Law :—	Professor TRENHOLME.
Institutes of Justinian, B. III. from Title 14..	
Maine, Chapters IX. and X	
Civil Law :—	
Mandate	
Loan	
Deposit	
Pledge	
Evidence	
Commercial Law :—	Professor WURTELE.
Merchant Shipping	
Affreightment	
Insolvency	
Civil Procedure	Professor DOUTRE.
Second Part	Lecturer HUTCHINSON.
Criminal Procedure	Lecturer ARCHIBALD.

FACULTY REGULATIONS.

1. Any person desirous of becoming a Matriculated Student, shall apply to the Dean of the Faculty for examination and entry in the Register of Matriculation, and shall procure a ticket of Matriculation and tickets of admission to the Lectures for each Session of the Course. (Students are requested to call on the Registrar who will furnish them with the necessary forms.)

2. Candidates for Matriculation shall pass an examination, satisfactory to the Faculty of Law, in Latin, French, English, Mathematics and Ancient and Modern History, and the books upon which such examination shall be had, shall be from time to time fixed by the Faculty.

3. Students in Law shall be known as of the First, Second and Third Years and shall be so graded by the Faculty. In each year, Students shall take the studies fixed for that year and those only, unless by special permission of the Faculty.

4. The Register of Matriculation shall be closed on the 1st of November in each year, and return thereof shall be immediately made by the Dean to the Registrar of the University. Candidates applying thereafter may be admitted on

a special examination to be determined by the Faculty ; and if admitted, their names shall be returned in a supplementary list to the Registrar.

5. Persons desirous of entering as Occasional Students shall apply to the Dean of the Faculty for admission as such Students, and shall obtain a ticket, or tickets, for the class or classes they desire to attend.

6. Students who have attended Collegiate courses of study in other Universities for a number of terms or sessions, may be admitted, on the production of certificates, to a like standing in this University, after examination by the Faculty.

7. All Students shall be subject to the following regulations for attendance and conduct :—

(1) A Class-Book shall be kept by each Professor and Lecturer, in which the presence or absence of Students shall be carefully noted ; and the said Class-Book shall be submitted to the Faculty at a meeting to be held between the close of the lectures and the commencement of the examinations ; and the Faculty shall after examination of such class-book, decide what students shall be deemed to have been sufficiently regular in their attendance to entitle them to proceed to the examination in the respective classes.

(2) Punctual attendance on all the classes proper to his year is required of each student. Professors will note the attendance immediately on the commencement of their lectures, and will omit the names of Students entering thereafter, unless satisfactory reasons are assigned. Absence or tardiness, without sufficient excuse, or inattention or disorder in the Class-room, if persisted in after admonition by the Professor, will be reported to the Dean of the Faculty, who may reprimand the student or report to the Faculty, as he may decide. While in the building, or going to or from it, students are expected to conduct themselves in the same orderly manner as in the Class-rooms. Any Professor observing improper conduct in the Class-rooms, or elsewhere in the building, will admonish the student ; and, if necessary, report him to the Dean.

(3) When Students are reported to the Faculty under the above rules, the Faculty may reprimand, report to parents or guardians, disqualify from competing for prizes or honours, suspend from classes, or report to the Corporation for expulsion.

(4) Any Student injuring the furniture or building, will be required to repair the same at his own expense, and will, in addition, be subject to such penalty as the Faculty may see fit to impose.

(5) The number of times of absence, from necessity or duty, that shall disqualify for the keeping of a Session shall in each case be determined by the Faculty.

(6) All cases of discipline involving the interests of more than one Faculty, or of the University generally, shall be reported to the Principal, or, in his absence, to the Vice-Principal.

8. At the end of every Session there shall be a general examination of all the Classes, under the Superintendence of the Professors, and of such other Examin-

ers as may be appointed by the Corporation, which examination shall be conducted by means of printed questions, answered by the students in writing, in the presence of the Examiners. The result shall be reported as early as possible to the Faculty, which shall decide the general standing of the Students accordingly.

9. Each Professor shall deliver at least two Lectures in each week. Each Lecture shall be of one hour's duration ; but the Professors shall have the right from time to time to substitute an examination for any such Lectures.

10. No Student shall be considered as having kept a Session, unless he shall have attended regularly all the courses of Lectures, and shall have passed the Sessional Examinations to the satisfaction of the Faculty, in four classes in the First Year and in five in the Second and Third Years

11. The Faculty shall have the power, upon special and sufficient cause shown, to grant a dispensation to any Student from attendance on any particular Course or Courses of Lectures, but no distinction shall, in consequence, be made between the Examinations of such Students, and those of the Students regularly attending Lectures. No Student shall pass for the degree of B.C.L. unless he has prepared a Thesis either in French or English which shall have been approved by the Faculty.

12. The subject of such Thesis shall be left to the choice of the Student, but it must fall within the range of study of the Faculty, and shall not exceed twenty pages of thirty lines each. Each student shall on or before the first day of February forward such Thesis to the Registrar of the Faculty, marked with the *nom de plume* which he shall adopt, and accompanied with a sealed envelope, bearing the same *nom de plume* on it, and containing inside, his name and the subject of his Thesis, and the envelope shall be opened in the presence of the Faculty after the Final decision shall be given on the respective merits of the several Theses.

13. The Elizabeth Torrance Gold Medal, in the Faculty of Law, shall be awarded to the Student who being of the Graduating Class, having passed the Final Examination, and having prepared a Thesis of sufficient merit in the estimation of the Faculty to entitle him to compete, shall take the highest marks in a special Examination for the medal, which Examination shall include the subject of Roman Law.

14. Every candidate before receiving the Degree of B.C.L., shall make the following declaration :—

Ego A.B. polliceor, me, pro viribus meis, studiosum fore communis hujus Universitatis boni, operamque daturum ut decus ejus ac dignitatem amplificem, et officiis omnibus ad Baccalaureatus in Jure Civili gradum pertinentibus fungar.

15. The Fees exigible in this Faculty are as follows :—

Matriculation Fee	$ 5 00
Sessional Fee by Ordinary Students	20 00
Sessional Fee by Occasional or Partial Students, for each course.	5 00
Graduation Fee, including Diploma and Case	10 00

Matriculation and Sessional Fees must be paid on or before Nov. 1st, and if not so paid, the name of the Student shall be removed from the Books, but may be re-entered by consent of the Faculty, and on payment of a fine of not less than $3. Students already on the Books of the University shall not be required to pay any Matriculation Fee.

1. Every Candidate for the Degree of D.C.L. in Course, under Chap. VIII., Section 4, of the Statutes of the University, shall be required to pass within four years from his graduation as B.C.L., such examination as shall be prescribed by the regulations of the Faculty of Law ; unless he shall have graduated as a B.A. of this University, either in Course or *ad eundem*. And not less than two months before proceeding to the Degree of D.C.L., the candidate shall deliver to the Faculty of Law twenty-five printed copies of a Thesis or Treatise upon a subject selected or approved by the Faculty; such Thesis to contain not less than twenty-five octavo pages of printed matter, and possessing such a degree of literary and scientific merit as shall in the opinion of the Faculty justify them in recommending him for that Degree. And in addition to the foregoing qualifications, the Candidate shall pay to the Secretary of the Faculty annually during term for the retention of his name on the books of the Faculty, during the said period of twelve years, a fee of two dollars, to be added to the Library fund of the Faculty.

Except as regards the Thesis, this regulation applies only to those who have taken the degree of B. C. L. subsequently to October, 1873. The examination under the above rule is as follows :—

(1) *International Law* :—

Phillimore, Wharton, Conflict of Laws ; Fœlix, Droit International Privé.

(2) *Roman Law* :—

Gaii Commentarii, IV. ; Pauli Sententiæ ; Pomponii Fragmentum de origine juris D. 1. 2. ; Novellæ Justiniani, cxviii. cxxvii. ; Ortolan Instituts de Justinien, Vol. I. ; Mommsen's History of Rome.

(3) *Constitutional Law* :—

Hallam, Constitutional History of England ; May, Constitutional History of England ; Mill, Representative Government ; The British North America Act, and cases thereunder.

(4) *Philosophy of Law* :—

Ahrens, Cours de Droit Naturel ; Austin, Jurisprudence ; Markby, Elements of Law ; Maine, Ancient Law.

(5) *Droit Civil et Commercial* :—

Pothier, Obligations, Vente et Communauté ; Marcadé, Obligations, Vente et Communauté ; Pardessus, Droit Commercial.

The Examination will be written and oral ; and translation from the Latin French or English texts, as well as familiarity with the subject, will be required.

Prizes, Honours and Standing.

Sesssion 1877-8.

FACULTY OF LAW.

GRADUATING CLASS.

ELIZABETH TORRANCE MEDAL.—PIERRE B. MIGNEAULT.

Prize for best Thesis..—HENRY J. KAVANAGH.

Second in General Standing—A. DUNBAR TAYLOR and C. J. BROOKE.

Standing in the Several Classes.

INTERNATIONAL LAW.—PROFESSOR KERR.

First, A. DUNBAR TAYLOR, Professor's Prize.

Second, PIERRE B. MIGNEAULT, Professor's Prize.

CIVIL LAW.—PROFESSOR RAINVILLE.

First, PIERRE B. MIGNEAULT.

Second, OSCAR GAUDET.

ROMAN LAW.—PROFESSOR TRENHOLME.

First, A. DUNBAR TAYLOR.

Second, PIERRE B. MIGNEAULT.

CRIMINAL PROCEDURE.—LECTURER ARCHIBALD.

First, CHARLES J. BROOKE.

Second, A. DUNBAR TAYLOR and ARCHIBALD MCGOUN, equal.

LEGAL HISTORY.—LECTURER LAREAU.

First, PIERRE B. MIGNEAULT.

Second, C. J. BROOKE.

CIVIL PROCEDURE.—LECTURER HUTCHINSON.

First, HENRY T. DUFFY.

Second, PIERRE B. MIGNEAULT, WM. J. CRIMMEN, equal.

MERCHANT SHIPPING.—LECTURER ROBIDOUX.

First, A. DUNBAR TAYLOR.

Second, HUSMER LANCTOT.

SECOND YEAR.

Passed the Sessional Examinations:—ARMINE D. NICOLLS, First Prize; R. D. MCGIBBON, Second Prize; GEORGE E. BAMPTON, E. B. BUSTEED, BRUNO NANTEL, PIERRE E. LAFONTAINE, FRED. CARTER, SETH P. LEET, CHARLES J. FLEET, WM. F. RITCHIE, JOSEPH A. DESCARRIES, JULES A. ST. JULIEN, JOSEPH A. CHAURET, LEON LEDIEU, EVARISTE P. LEBLANC, BOUTHILLIER J. TRUDEL, B. C. MCLEAN, THEOPHILE LEVASSEUR, LEANDRE ETHIER, ALPHONSE LEVEILLE, EDMOND R. ST. JEAN, WILLIAM L. ROSS, EUGENE SIMARD, HENRI PILLETT, ZEBULON E. CORNELL, ALFX. E. DUNN, PAUL G. MARTINEAU, J. H. G. BUCKLEY, ALDERIC DECARY.

Standing in the Several Classes.

INTERNATIONAL LAW.—Professor Kerr.
First, Pierre E. Lafontaine.
Second, R. D. McGibbon, E. B. Busteed, equal.

CIVIL LAW.—Professor Rainville.
First, Bruno Nantel.
Second, Geo. E. Bampton, A. D. Nicholls, equal.

ROMAN LAW.—Professor Trenholme.
First, A. D. Nicholls.
Second, B. C. McLean, R. D. McGibbon, equal.

CRIMINAL LAW.—Lecturer Archibald.
First, George E. Bampton, A. D. Nicolls, equal.
Second, R. D. McGibbon.

LEGAL HISTORY.—Lecturer Lareau.
First, R. D. McGibbon.
Second, Geo. E. Bampton.

CIVIL PROCEDURE.—Lecturer Hutchinson.
First, R. D. McGibbon, C. J. Fleet, equal.
Second, Geo. E. Bampton, A. D. Nicholls, equal.

MERCHANT SHIPPING.—Lecturer Robideaux.
First, Leon Ledieu.
Second, E. Trudel.

First Year.

Passed the Sessional Examinations :—Albert W. Atwater, First Prize; Donald Montgomery, Second Prize; Edmund W. Guerin, Third Prize; Wm. P. Sharp, Robert Weir, John McLean Campbell, James G. A. Creighton, George H. Chandler, Arthur J. David, John McKercher, Clejus J. Robillard, Jean B. Laplante, Joseph A. Austin, Alfred L. De Beaumont, J. P. Cooke, Joseph A. Dorion, Gonzalve H. Goyette, Samuel W. Jackson, Andrew McDonnell, William McLennan, Henry R. Hammond, Frs. O. Dugas, Jas. Wm. Brakenridge, John C. Alguire, Wm. B. S. Reddy, Camille Madore, Joseph F. Painchaud, Onesime Boisvert, Pierre J. Dore, Joseph B. Berthelet, Jean B. Biron, C. L. De Martigny, Herbert S. Hunter, Alexandre Lamiraude, J. B. C. Bourque, Alfred J. Chartrand.

Standing in the Several Classes.

CIVIL LAW.—Professor Rainville.
First, Albert W. Atwater.
Second, Wm. P. Sharp.

ROMAN LAW.—Professor Trenholme.
First, Albert W. Atwater, John McLean Campbell, equal.
Second, Jas. G. A. Creighton.

LEGAL BIBLIOGRAPHY.—Lecturer Lareau.
First, Albert W. Atwater, Frs. C. Dugas, equal.
Second, Edmund W. Guerin.

CIVIL PROCEDURE.—Lecturer Hutchinson.
First, Wm. P. Sharp.
Second, Geo. H. Chandler.
INSOLVENCY.—Lecturer Robidoux.
First, Joseph A. Dorion.
Second, Clejus J. Robillard.

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FACULTY OF MEDICINE.

Hiram N. Vinéberg, of Montreal, for Thesis and best Examination in all the branches of Study.—Holmes Gold Medal.

Thos. W. Mills, M.A., Hamilton, O., Prize for the best Examination in the Final Branches.

Students deserving honorable mention in the Final Branches :—Neilson & Gibson,

William R. Sutherland, of Montreal, Q., Prize for the best Examination in the Primary Branches.

John M. Lefebvre of Toronto Ont., for Chemistry and Primary Examination.—Sutherland Gold Medal.

Students deserving Honourable mention in the Primary Branches :—Lawford, J. L. Brown, Imrie, Shaw, Williston, Gurd, Stevenson, Lefebvre, Gray, J. Smith, McCully, and McQuigan.

E. J. Rogers, C. M. Gordon, Prize in Botany.

J. H. Carson, Second Prize in Botany.

H. Beaumont Small, Prize for collection of Plants.

Senior Class.—John B. Lawford, Prize in Practical Anatomy.

Deserving Honourable mention in Practical Anatomy.

Senior Class.—Lyford, Small, Imrie, McArthur, Gray, Stevenson, Smith, J. Sutherland, Gurd and Brown (J. L.).

Junior Class—William J. Gray, Prize in Practical Anatomy.

Deserving Honourable mention in Practical Anatomy.

Junior Class.—Beer, Joseph, Moore, Harvie and Cormack (equal), Ross and B. E. McKenzie (equal), Rogers, Heyd and McLain (equal) Struthers (R. B.) and Laurin (equal).

A. D. Webster, Prize in Practical Chemistry.

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FACULTY OF ARTS.

GRADUATING CLASS.

B. A. Honours in Classics.

William S. Stewart.—First Rank Honours and Chapman Gold Medal.

B. A. Honours in Natural Science.

James T. Donald.—First Rank Honours and Logan Gold Medal.

Hastewell W. Thornton.—First Rank Honours.

B. A. Honours in Mental and Moral Philosophy.

JAMES ROSS.—First Rank Honours and Prince of Wales Gold Medal.

CHARLES S. PEDLEY.—First Rank Honours.

RANKINE DAWSON.—Second Rank Honours.

B. A. Honours in English Language, Literature and History.

EDMUND W. P. GUERIN.—First Rank Honours and Shakspere Gold Medal.

THIRD YEAR.

WILLIAM MCCLURE.—First Rank Honours in Mathematical Physics and Anne Molson Prize; First Rank General Standing.

ALEXANDER S. CROSS.—First Rank Honours in Mental and Moral Philosophy and Prize; First Rank General Standing.

RICHARD G. MCCONNELL.—First Rank Honours in Natural Science and Prize for Collection of Plants; First Rank General Standing.

WILLIAM D. LIGHTHALL.—First Rank Honours in English Language, Literature and History and Prize; First Rank General Standing.

WILLIAM H. STEVENS.—First Rank Honours in Natural Science.

ROBERT J. B. HOWARD.—First Rank Honours in Natural Science and Prize.

ROBERT EADIE.—First Rank General Standing; Prize in Classics.

PASSED THE SESSIONAL EXAMINATION.

McClure, Cross, McConnell, Eadie, Lighthall, Stevens, Howard, Robertson, Lane, Wood, McKibbin, Redpath.

SECOND YEAR.

SIDNEY W. HUNTON.—(Ottawa Collegiate Institute.)—First Rank Honours in Mathematics and Prize; First Rank General Standing.

J. HERBERT DAREY.—(High School, Montreal.)—Second Rank Honours in Mathematics; First Rank General Standing; Prize in German.

WILLIAM A. MCKENZIE.—(Upper Canada College.)—First Rank General Standing; Prize in English Literature.

DOUGALD CURRIE.—(Galt Collegiate Institute).—First Rank General Standing; Prize in Botany.

HARCOURT J. BULL.—(High School, Montreal).—First Rank General Standing; Prize in Logic.

PAUL T. LAFLEUR.—(High School, Montreal).—Prize in French.

PASSED THE SESSIONAL EXAMINATION.

Darey, Hunton, McKenzie, Currie, Bull, Keays, Lafleur, Raynes, Roberts, Molson, Cunningham, Ogilvie, Larivière, Bayne (G. D.), Pillsbury, Bennett, Craig, Scriver, Muir, McIntyre.

FIRST YEAR.

ALEXANDER FALCONER.—(High School, Montreal.)—First Rank Honours in Mathematics and Second Prize; First Rank General Standing; Prize in English; Prize in Classics; Prize in Chemistry; Prize in German; Prize in French.

WILLIAM A. FERGUSON.—(High School, Richibucto.) First Rank Honours in Mathematics and First Prize; First Rank General Standing.

JOHN E. JONES.—(Digby Academy, N. S.)—First Rank General Standing.
ARCHIBALD MCLEOD.—(Prince of Wales College, Charlottetown, P.E.I.) Prize in Classics.
G. ROBERTSON.—(Douglas School, Garafraxa, Ont.,).—Prize in Hebrew.
FRANK WEIR.—(High School, Montreal.)—Prize for English Essay.

PASSED THE SESSIONAL EXAMINATION.

Falconer, Ferguson, Jones, McLeod (Archibald), Powell, Elder, Lyman, Robertson, Ami, Bracq, Rutherford, Macpherson, McLeod (Alvan), McGibbon, Scott, Rogers, Weir.

DEPARTMENT OF PRACTICAL AND APPLIED SCIENCE.

GRADUATING CLASS.

FRANK ADAMS.—First Rank Honours in Natural Science; Prize in Chemistry.
CHAS. M. BOULDEN.—Skelton Prize in Engineering.
PHILIP D. ROSS.—Prize in French.

MIDDLE YEAR.

JOHN O'DWYER.—Prize in Engineering.
WILLIAM F. COCHRANE.—Second Prize in Engineering.
RICHARD G. MCCONNELL.—Prize in Zoology; Prize in Blowpipe Analysis.

PASSED THE SESSIONAL EXAMINATION.

Civil and Mechanical Engineering.

O'Dwyer, Cochrane, Smith, Skaife.

Mining Engineering.

McConnell.

JUNIOR YEAR.

PASSED THE SESSIONAL EXAMINATIONS.

Archbald, Richard, Busteed, Collins.

Earl of Dufferin's Medals for a Prize Essay in History.

EDMUND W. P, GUERIN.—(Fourth Year Student.) Silver Medal.

At the examinations in September 1877, the following *Scholarships* and *Exhibitions* were awarded :—

THIRD YEAR.—MCCLURE and MCCONNELL and CROSS and EADIE;—*W. C. MacDonald Scholarships.*

SECOND YEAR.—HUNTON and DAREY and BULL;—*W. C. MacDonald Exhibitions.*
MCKENZIE :—*The Jane Redpath Exhibition.*

FIRST YEAR.—FALCONER and FERGUSON;—*W. C. MacDonald Exhibitions.*
JONES.—*Jane Redpath Exhibition.*
AMI (H. M.).—*The Governors' Exhibition.*
ROGERS.—*The T. M. Taylor Exhibition.*

CHRISTMAS EXAMINATIONS, 1877.

GREEK.

THIRD YEAR.—*Class I.*—Eadie; Cross and McClure, equal; Stevens, Mercer, *Class II.*—Lighthall; Lane and Wood, equal; Robertson (Hy. McN.). *Class III.*—McKibbin, Redpath, Phinney.

SECOND YEAR.—*Class I.*—Hunton; Bull and Keays equal; Darey and McKenzie, equal. *Class II.*—Lafleur; Craig and Currie and Raynes, equal. Roberts and Anderson, equal; Molson and Ogilvie, equal. *Class III.*—Scriver and McNabb and McIntyre, equal; Bayne (G. D.) and Muir (A. C.), equal; Pillsbury and Bennett, equal; Cunningham, Larivière, Meighen, Klock.

FIRST YEAR.—*Class I.*—Falconer and Ferguson, equal; McLeod (Archibald), Rogers, Jones, Ami (Hy. M.); Bracq and Lyman (Walter E.), equal. *Class II.*—Black and Elder and Powell, equal; McGibbon and Robertson (George), equal; McLeod (Alvan) and White, equal; Macpherson and Gamble, equal. *Class III.*—Duncan and Lawford, equal; Weir, Muir (John M. C.); Scott and Townsend, equal.

LATIN.

THIRD YEAR.—*Class I.*—Eadie, Howard, Mercer; Cross and Stevens, equal; Lane, Lighthall. *Class II.*—McKibbin and Wood, equal; McConnell, Redpath, Phinney. *Class III.*—Robertson (Hy. Mc.N).

SECOND YEAR.—*Class I.*—Hunton and McKenzie, equal; Darey, Keays, Bull, Currie, Lafleur. *Class II.*—Molson, Raynes; Bennett and Anderson, equal; Meighen and Roberts, equal; Bayne (G. D.), Ogilvie. *Class III.*—Craig and Cunningham, equal; Scriver; McIntyre and Muir (A. C.), equal; Pillsbury and McNabb and Larivière, equal; Klock.

FIRST YEAR.—*Class I.*—Falconer, Ferguson, McLeod (Archibald), Lyman (W.E.), Jones; Ami (H. M.) and Elder and Rogers, equal. *Class II.*—Macpherson and Powell, equal; Black and Bracq, equal; Robertson (Geo.), Weir; McLeod (Alvan) and Scott and White, equal; Townsend. *Class III.*—McGibbon; Lawford and Muir (J. M. C.) and Gamble, equal; Hay, McGregor, Duncan.

ENGLISH LANGUAGE AND LITERATURE.

FOURTH YEAR.—*Class I.*—Lyman (C.); Graham and Guerin, equal. *Class II.*—McKillop, Torrance, *Class III.*—McLaren, Taylor.

THIRD YEAR.—*Class I.*—Eadie, Lighthall. *Class II.*—Howard; McClure and McConnell equal; Stevens, Wood. *Class III.*—Redpath, Robertson, Phinney, Lane.

FIRST YEAR.—*Class I.*—Falconer and Elder, equal; Jones and Ferguson, equal; Rogers and Lyman (W. E.), equal; Powell. *Class II.*—Macpherson, Robertson, Townsend; Gamble and Weir, equal; McGregor, McLeod (Archibald); Ami (H.) and McGibbon, equal; Bracq. *Class III.*—Hay; Muir and White, equal; Black, Scott, McLeod (Alvan), Duncan, Lawford.

MENTAL PHILOSOPHY.

FOURTH YEAR.—*Class I.*—Pedley and Ross, equal; Blakely, Newnham, Lyman (C.) *Class II.*—Donald; Dawson and McFadyen, equal; Thornton, Ewing. *Class III.*—McLeod, McKillop, Sweeny, Wellwood, Guerin, Orme, Torrance, Graham, McLaren, Wright.

MORAL PHILOSOPHY.

THIRD YEAR.—*Class I.*—Eadie, Cross, Lighthall, McClure, Howard; Ford and Bowers and Lane, equal. *Class II.*—Wood, Mercer, Stevens, Phinney. *Class III.*—McLachlan, Mallory, Robertson (H. Mc N); McKibbin and Shearer, equal; Redpath, Balmer, McCunn, McKechnie, York.

ELEMENTARY PSYCHOLOGY.

SECOND YEAR.—*Class I.*—Hunton; Bull and Darey and Keays, equal; Cunningham and Currie, equal. *Class II.*—McKenzie, Roberts, Pillsbury, Meighen; Ogilvie and Anderson, equal; Lafleur, Scriver (C. W.), Larivière; Bayne (G. D.) and Craig, equal. *Class III.*—Campbell and Saer, equal; Grieve, Guertin, Raynes, McIntyre, Bennett, Molson, McNabb (R.), Klock; Coates and Muir, equal; Arthur, Henry.

HEBREW.

SENIOR YEAR.—*Class I.*—Currie. *Class II.*—Walker, Anderson, Mitchell; Bayne (G. D.) and Craig equal. *Class III.*—Hyde, McNabb, McIntyre, Bayne, (G. T.), Henry.

JUNIOR YEAR.—*Class I.*—Blakely and Robertson, equal; Powell, McLeod, Black, Donald, Townsend. *Class II.*—Gamble, Mallory, Sliter, Geddes; Donaldson and Orme equal. *Class III.*—McFarland, Dow.

ASTRONOMY.

FOURTH YEAR.—*Class I.*—Graham, Pedley (C. S.); Lyman and Torrance, equal. *Class II.*—None. *Class III.*—Stewart, McKillop.

MATHEMATICAL PHYSICS.

FOURTH YEAR.—*Class I.*—Graham. *Class II.*—Stewart. *Class III.*—Blakely, and Newnham and Torrance, equal; McKillop, Guerin; Ewing and McFadyen and Lyman, equal; McLaren.

THIRD YEAR.—*Class I.*—Cross, Stevens, McClure, Eadie. *Class II.*—Howard, McConnell, Phinney. *Class III.*—Lighthall, Lane, McKibbin, Robertson (H. McN.), Wood, Redpath.

EXPERIMENTAL PHYSICS.

FOURTH YEAR.—*Class I.*—Graham, Ross (J.), Dawson, Donald, Torrance. *Class II.*—Thornton, Blakely. *Class III.*—Lyman, Taylor, Guerin, McKillop, Stewart.

THIRD YEAR.—*Class I.*—McClure, Cross. *Class II.*—McConnell, Redpath. *Class III.*—Howard and Lighthall, equal; Stevens, Scriver (J. F.). Lane, Wood; Phinney and Robertson (H. McN.), equal.

MATHEMATICS.

SECOND YEAR.—*Class I.*—Darey and McKenzie, equal; Currie, Hunton, Bull, Cunningham. *Class II.*—Molson; Larivière and Roberts, equal; Lafleur. *Class III.*—Ogilvie, Keays, Raynes; Bayne (G. D.) and McNabb, equal; Scriver, (C. W.); McIntyre and Meighen, equal: Muir (A. C.), Guertin, Craig, Pillsbury, Klock.

FIRST YEAR.—*Class I.*—Falconer, Ferguson, Rogers, Ami, Jones, McLeod (Arch.), Powell. *Class II.*—McLeod (Alvan) and Robertson (G), equal. *Class III.*—McGibbon, Lawford, Elder, Hay, McGregor, Gamble, Bracq, Townsend; Lyman (W. E.) and Macpherson and White, equal; Muir (J. M. C.), Black, Duncan, Burland; Scott and Weir, equal.

MINERALOGY AND LITHOLOGY.

FOURTH YEAR.—*Class I.*—Donald and Thornton, equal; Dawson, Newnham, Ross (Jas.), Lyman (C.) *Class II.*—Pedley, McFadyen, McKillop; Torrance, and Wellwood, equal; Ewing. *Class III.*—Orme, Wright.

ZOOLOGY.

THIRD YEAR.—*Class I.*—Eadie, Cross, Lighthall; Howard and McClure and Mitchell, equal; Lane; McConnell and Wood, equal; Stevens. *Class II.*—Mercer, McKibbin, Redpath, Robertson. *Class III.*—Bayne (G.T), Hyde.

BOTANY.

SECOND YEAR.—*Class I.*—Roberts, Currie, Craig, Scriver (C. W.), Molson; Hunton and Lafleur, equal; Pillsbury, Keays, McKenzie, Bull, Cunningham, Mitchell, Wright, Raynes. *Class II.*—Ogilvie, McIntyre, Grieve, Darey, Anderson, McKechnie, Campbell. *Class III.*—Klock, Guertin, Muir, Larivière, Meighen, Bennett, McNabb, Bayne (G. D.), Saer, Coates.

CHEMISTRY.

FIRST YEAR.—*Class I.*—Falconer, Jones, Powell, Ferguson. *Class II.*—Robertson (G.), Lyman (W. E.), Ami, Bracq, Scott, Rogers, Lawford, Geddes (Oc.), Macpherson; Elder and McLeod (Archibald), equal; McGibbon *Class III.*—Knechtel (Oc), White, Muir (J. M. C.), McLeod (Alvan), Black, Weir, Duncan; Chaffee and Townsend, equal; Gamble, McGregor.

FRENCH.

THIRD YEAR.—*Class I.*—None. *Class II.*—None. *Class III.*—Robertson.

SECOND YEAR.—*Class I.*—Lafleur, Darey. *Class II.*—Larivière, McKenzie; Guertin and Bull, equal: Ogilvie and Roberts, equal; *Class III.*—Raynes, Molson, Scriver (C. W.), Muir (A. C.), Campbell, Cunningham.

FIRST YEAR.—*Class I.*—Ami (H. M.), Ferguson; Bracq and Falconer, equal; Jones, McLeod. *Class II.*—Elder and Macpherson, equal; Rogers; McGibbon and Weir, equal; Lawford, Duncan, Hay. *Class III.*—Muir (J. M. C.) and Scott, equal; McGregor and White, equal; Argue, Chaffee.

GERMAN.

SECOND YEAR.—*Senior Division.*—*Class I.*—Darey, Hunton. *Class II.*—Lafleur. *Class III.*—Bennett.

Junior Division.—*Class I.*—Keays. *Class II.*—None. *Class III.*—None.

FIRST YEAR.—*Senior Division.*—*Class I.*—None. *Class II.*—Camerle. *Class III.*—None.

Junior Division.—*Class I.*—Lyman, Falconer, Jones, Lawford. *Class II.*—Ami. *Class III.*—None.

DEPARTMENT OF PRACTICAL AND APPLIED SCIENCE.

APPLIED MECHANICS.

SENIOR YEAR.—*Class I.*—Hall. *Class II.*—Boulden, Ross. *Class III.*—Swan.

RAILWAY WORK

SENIOR YEAR.—*Class I.*—None. *Class II.*—Swan, Boulden, Hall. *Class III.*—Ross.

MACHINERY.

SENIOR YEAR.—*Class I.*—Boulden and Hall, equal; Swan. *Class II.*—None. *Class III.*—Ross.

APPLIED MECHANICS.

MIDDLE YEAR.—*Class I.*—None. *Class II.*—Cochrane, Skaife, Smith, McConnell. *Class III.*—O'Dwyer and Power, equal; Evans, Robertson (W. F.), Dudderidge.

RAILWAY WORK.

MIDDLE YEAR.—*Class I.*—None. *Class II.*—Power, McConnell, Cochrane. *Class III*—Evans, O'Dwyer, Robertson (W. F.), Smith, Skaife, Dudderidge.

MACHINERY.

MIDDLE YEAR.—*Class I.*—O'Dwyer, Cochrane. *Class II.*—Skaife, Evans, Smith. *Class III.*—Dudderidge.

SURVEYING.

JUNIOR YEAR.—*Class I.*—None. *Class II.*—None. *Class III.*—Busteed, Hague; Richard and Stephen, equal; Collins, Archbald.

MIDDLE YEAR.—(*Civil and Mining Engineering Students*). *Class I.*—None. *Class II.*—None. *Class III.*—Robertson (W. F.); Skaife and McConnell, equal; O'Dwyer.

DRAWING.

JUNIOR YEAR.—*Class I.*—Richard. *Class II.*—Archbald, Collins. *Class III.*—Busteed, Hague, Stephen.

MIDDLE YEAR.—(*Civil and Mechanical Engineering Students*). *Class I.*—O'Dwyer, Smith. *Class II.*—Cochrane. *Class III.*—None.

MENSURATION.

MIDDLE YEAR.—*Class I.*—Cochrane and O'Dwyer, equal. *Class II.*—Smith, McConnell, Robertson. *Class III.*—Skaife; Evans and Power, equal.

ASTRONOMY.

SENIOR YEAR.—*Class I.*—Ross (P. D.), Boulden. *Class II.*—Swan. *Class III.*—Hall.

MATHEMATICAL PHYSICS.

SENIOR YEAR.—*Class I.*—Ross (P. D.) *Class II.*—None. *Class III.*—Swan.

MIDDLE YEAR.—*Class I.*—O'Dwyer. *Class II.*—Cochrane. *Class III.*—Adams, Power, Skaife, Smith.

EXPERIMENTAL PHYSICS.

SENIOR YEAR.—*Class I.*—Swan. *Class II.*—Hall, Adams. *Class III.*—Boulden, Ross (P. D.)

MIDDLE YEAR.—*Class I.*—O'Dwyer, Cochrane. *Class II.*—None. *Class III.*—Power and Robertson (W. F.), equal; Smith, Evans, Skaife, Dudderidge.

MATHEMATICS.

MIDDLE YEAR.—*Class I.*—O'Dwyer. *Class II.*—None. *Class III.*—Cochrane, Power, Dudderidge, Smith, Skaife, Evans.

JUNIOR YEAR.—*Class I.*—Collins, Archibald. *Class II.*—None. *Class III.*—Hague, Richard, Busteed, Stephen.

MINERALOGY AND LITHOLOGY

SENIOR YEAR.—*Class I.*—Hall. *Class II.*—Swan, Ross (P.), Boulden. *Class III.*—Scriver.

MIDDLE YEAR.—(*Mining Course.*)—*Class I.*—McConnell. *Class II.*—Robertson (W. F.), Power.

ZOOLOGY.

MIDDLE YEAR.—*Class I.*—O'Dwyer, Skaife. *Class II.*—Cochrane, Evans, Power, Robertson (W. F.) *Class III.*—Smith.

CHEMISTRY.

JUNIOR AND MIDDLE YEAR (*in Part*)—*Class I.*—None. *Class II.*—Archbald. *Class III.*—Hague, Busteed, Stephen, Robertson (W. F.)

ENGLISH.

JUNIOR YEAR.—*Class II.*—Hague, Stephen. *Class III.*—Archbald, Busteed, Collins, Richard.

GERMAN.

SENIOR YEAR.—*Class I.*—None. *Class II.*—None. *Class III.*—Boulden.

MIDDLE YEAR.—*Class I.*—None. *Class II.*—None. *Class III.*—Robertson, Power.

FRENCH.

SENIOR YEAR.—*Class I.*—Ross. *Class II.*—McConnell, Adams. *Class III.*—Swan, Hall.

MIDDLE YEAR.—*Class I.*—O'Dwyer. *Class II.*—Skaife. *Class III.*—Smith, Cochrane.

JUNIOR YEAR.—*Class I.*—Richard. *Class II.*—Hague, Stephen. *Class III.*—Collins, Busteed, Archbald.

SESSIONAL EXAMINATIONS, 1878.

ORDINARY COURSE IN ARTS.

GREEK.

B. A. ORDINARY.—*Class I.*—Graham, Stewart, Newnham, Lyman (A. C.).
Class II.—Blakely, Sweeny, Torrance, Wellwood.
Class III.—McFadyen and McKillop, equal;—Ewing, Taylor.

THIRD YEAR.—*Class I.*—Eadie (prize);—McClure, Cross, Mercer.
Class II.—Lane and Stevens, equal;—Wood, Lighthall, Robertson.
Class III.—Redpath, McKibbin.

SECOND YEAR.—*Class I.*—Darey and Keays and Lafleur, equal;—McKenzie, Hunton, Bull, Raynes, Roberts, Craig, Currie, Molson.
Class II.—Bennett;—Bayne and Ogilvie, equal;—Muir, Pillsbury;—Klock and McIntyre, equal;—Larivière, Cunningham, Scriver.
Class III.—McNabb.

FIRST YEAR.—*Class I.*—Falconer (prize);—McLeod (Arch.), Ferguson, Ami (Hy. M.), Lyman (Walter E.), Jones. *Class II.*—Bracq, Rogers, Powell, Black, Elder, Robertson. *Class III.*—Gamble, Macpherson, McLeod (Alvan), White, McGibbon, Weir, Rutherford, Muir (J.M.C.), Scott, Lawford.

LATIN.

B. A. ORDINARY.—*Class I.*—Stewart, Newnham, Graham, Blakely, Guerin.
Class II.—Taylor, Lyman (A. C.);—McFadyen and McLaren, equal;—Sweeny, Torrance. *Class III.*—McKillop and Wellwood, equal;—Ewing.

THIRD YEAR.—*Class I.*—Eadie, (prize);—Howard, Stevens, Mercer, Cross, Lighthall, Lane. *Class II.*—McConnell, Wood;—Redpath and Robertson, equal;—McKibbin. *Class III.*—None.

SECOND YEAR.—*Class I.*—Darey, Keays, Hunton, McKenzie, Lafleur, Bull, Raynes. *Class II.*—Currie and Molson, equal;—Craig and Ogilvie, equal;—Bayne and Bennett, equal;—Roberts and Scriver, equal;—Pillsbury, Muir. *Class III.*—McNabb, Cunningham, Larivière, McIntyre.

FIRST YEAR.—*Class I.*—McLeod (Arch.) (prize);—Falconer and Ferguson, equal;—Elder and Lyman (Walter E.), equal;—Rogers, Jones.
Class II.—Bracq, Powell, Ami (H.M.);Black and Macpherson, equal;—Weir and White, equal;—Robertson. *Class III.*—McGibbon, McLeod (Alvan), Gamble, Scott, Muir (J. M. C.), Rutherford, Lawford.

HISTORY.

FIRST YEAR.—*Class I.*—Falconer and Jones, equal;—Ferguson, McLeod (Arch.),

Rogers. *Class II.*—Lyman (Walter E.), Black, Powell;—Ami (Hy. M.) and Bracq, equal;—Weir and Shortis, equal;—Robertson, Elder. *Class III.* — McLeod (Alvan), Rutherford; McGibbon and White, equal;—Scott; Gamble and Lawford and Muir, (J. M. C.) and Macpherson, equal.

LOGIC, AND MENTAL AND MORAL PHILOSOPHY.

B. A. ORDINARY.— (*Mental and Moral Philosophy*)—*Class I.*—Ross, Pedley, Blakely, Newnham. *Class II.*—Dawson, McFadyen. *Class III.*—Ewing and McLaren and Wellwood, equal;—McKillop, Sweeny, Wright.

OCCASIONAL STUDENT IN FOURTH YEAR.—(*Mental Philosophy*)—*Class III.*—Orme.

THIRD YEAR.—(*Moral Philosophy*)—*Class I.*—Cross (prize); Bowers, Eadie. *Class II.*—McClure, Ford, Lighthall, Lane, Howard, McLachlan. *Class III.* — Robertson (H. McN.), Mallory, Wood, Balmer, Stevens, McKibbin, McKechnie, Mercer, Redpath.

SECOND YEAR.—(*Logic*)—*Class I.*—Bull (prize);—Currie, Keays, McKenzie;—Hunton and Lafleur and Roberts, equal;—Darey, Pillsbury, Larivière. *Class II.*—Ogilvie;—Cunningham and Mitchell and Molson, equal;—Bayne (G.D.) and Raynes, equal;—Muir (A. C.), Scriver, Bennett, Craig, Anderson, McNabb.

ENGLISH LITERATURE.

B. A. ORDINARY.—*Class I.*—Guerin, McKillop. *Class II.*—Torrance, Graham, Taylor.

THIRD YEAR.—(*Rhetoric*).—*Class I.*—Lighthall (prize);—Eadie, Howard. *Class II.*—McClure, McConnell, Stevens. *Class III.*—Wood, Lane, Robertson, Redpath.

SECOND YEAR.—*Class I.*—Mackenzie (prize);—Lafleur, Currie; Darey and Keays, equal;—Bull, Raynes. *Class II.*—Hunton and Roberts, equal;—Larivière, Muir. *Class III.*—Cunningham, Bennett, Scriver, Pillsbury, Ogilvie, Bayne, Molson, McIntyre, Craig, Klock.

FIRST YEAR.—*Class I.*—Falconer (prize);—Elder; Ferguson and Powell, equal; Lyman and Rutherford, equal;—Robertson. *Class II.*—Jones, Rogers, Black, Scott, McGibbon, McLeod (Archibald), McLeod (Alvan). *Class III.*—Gamble, Bracq, White, Ami, Weir, Macpherson, Hay.

Prize for English Essay.—Weir (F.)

HISTORY.

B. A. ORDINARY.—*Class I.*—Guerin, McKillop. *Class II.*—Torrance, Graham, Taylor.

FRENCH.

THIRD YEAR.—*Class I.*—None. *Class II.*—None. *Class III.*—Robertson.

SECOND YEAR.—*Class I.*—Lafleur (prize);—Darey, Larivière. *Class II.*—Raynes, Roberts, Bull, McKenzie, Molson, Ogilvie. *Class III.*—Scriver, Muir, Cunningham.

FIRST YEAR.—*Class I.*—Falconer (prize);—McLeod, Jones, Ami, Lyman, Elder, Bracq, Ferguson. *Class II.*—Macpherson, White, Shortis, Lawford,

Rogers, Rutherford. *Class III.*—McGibbon, Hay, Scott and Weir, equal;—Argue;—Chaffee and Muir, equal.

GERMAN.

SECOND YEAR.—*Senior Division*:—*Class I.*—Darey (prize), Hunton. *Class II.*—Bennett, Pillsbury. *Class III.*—None.

Junior Division.—*Class I.*—Bland, Keays. *Class II.*—None. *Class III.*—None.

FIRST YEAR.—*Class I.*—Falconer (prize), Lyman (W. E.). *Class II.*—Jones, Lawford. *Class III.*—Ami (H. M.), Argue.

HEBREW.

JUNIOR YEAR.—*Class I.*—Robertson (prize), Mallory, Geddes, Bowers, Ford, Powell. *Class II.*—Orme, McLeod;—Black and Gamble, equal;—*Class III.*—Townsend, McFarland.

SENIOR YEAR.—*Class I.*—Currie, Mitchell;—Anderson and Craig, equal;—Bayne (G. D). *Class II.*—Henry, Bayne (G. T.), McIntyre. *Class III.*—McNabb, Hyde.

MATHEMATICAL PHYSICS.

B. A. ORDINARY.—*Class I.*—None. *Class II.*—Torrance, Stewart, Newnham. *Class III.*—Graham, Lyman (C.), Pedley (C. S.), McFadyen, Taylor, McKillop, McLaren, Blakely, Guerin, Wellwood;—Ewing and Sweeny equal.

THIRD YEAR.—*Class I.*—McClure, Stevens, McConnell. *Class II.*—Cross, Lighthall. *Class III.*—Howard, Robertson (H. McN.), Eadie, Lane, McKibbin, Wood, Redpath.

THIRD YEAR HONOUR COURSE.—*First Rank Honours.*—McClure.—(*Anne Molson Prize*).

MATHEMATICS.

SECOND YEAR.—*Class I.*—Hunton, Darey, Currie, Bull, McKenzie, Cunningham. *Class II.*—Keays, Ogilvie. *Class III.*—Larivière, Lafleur, Molson and Roberts, equal;—McIntyre, Raynes, Scriver, Pillsbury, Craig, Muir (A. C.), Bayne (G. D.), Klock.

FIRST YEAR.—*Class I.*—Falconer, Ferguson, Jones. *Class II.*—MacLeod (Arch.), Rutherford, Rogers. *Class III.*—Powell, Ami (H.M.), McLeod (Alvan), Macpherson, Bracq, Elder, McGibbon (A.), Lyman (W. E.), Weir, Burland, Scott, Robertson (G.).

SECOND YEAR HONOUR COURSE.—*First Rank Honours.*—Hunton (*Prize*). *Second Rank Honours.*—Darey.

FIRST YEAR HONOUR COURSE.—*First Rank Honours*:—Ferguson (*Prize*); Falconer (*Second Prize*).

EXPERIMENTAL PHYSICS.

B. A. ORDINARY.—*Class I.*—Donald, Thornton, Lyman (C.). *Class II.*—Torrance, *Class III.*—Graham, McLaren, Blakely, Taylor, Guerin, Sweeny.

THIRD YEAR.—*Class I.*—McClure, Lighthall. *Class II.*—Stevens, Howard, Wood, McConnell. *Class III.*—Robertson (H. McN.), Redpath, Cross.

NATURAL SCIENCE.

B. A. ORDINARY.—(*Geology*)—*Class I.*—Donald, Thornton, Ross, Newnham, Dawson, Lyman. *Class II.*—Ewing and McFadyen equal; Wellwood. *Class III.*—Orme.

B. A. HONOURS.—Donald (*Logan Medal*); Thornton.

THIRD YEAR.—(*Zoology*)—*Class I.*—Howard, McConnell, Eadie, Stevens, McClure Lighthall, Cross. *Class II.*—Lane; Mitchell and Robertson, equal;—Mercer, Wood, Redpath, McKibbin. *Class III.*—None.

THIRD YEAR HONOURS.—Howard (prize);—McConnell, Stevens.

SECOND YEAR.—(*Botany*)—*Class I.*—Currie (Prize), Darey, Molson, McKenzie, Bull, Cunningham, Keays, Hunton, Roberts. *Class II.*—Raynes, Pillsbury, Bennett, Lafleur, Ogilvie, Mitchell, Bayne, McIntyre, Larivière, McNabb, Craig, Scriver. *Class III.*—Campbell, Bowers, Klock, Anderson, Ford, Muir, Saer, McKechnie.

CHEMISTRY.

FIRST YEAR.—(*Chemistry*)—*Class I.*—Falconer (prize). *Class II.*—Ferguson, Jones, Elder, Powell. *Class III.*—Robertson (George) and Bracq, equal;—Gamble; Macpherson and McLeod (Arch.), equal; White, Lyman (W.E.), Black; McGibbon and Argue, equal; Scott and Ami, equal; Burland, Pillsbury, Lawford, Rutherford, McLeod (Alvan).

DEPARTMENT OF PRACTICAL AND APPLIED SCIENCE.

SURVEYING.

MIDDLE YEAR.—*Class I.*—McConnell and O'Dwyer, equal. *Class II.*—Skaife. *Class III.*—Robertson.

JUNIOR YEAR.—*Class I.*—Busteed. *Class II.*—Archbald, Richard. *Class III.*—Collins, Hague, Waddell.

DRAWING.

SENIOR YEAR.—*Class I.*—None. *Class II.*—Swan, Boulden, Hall. *Class III.*—Ross.

MIDDLE YEAR.—*Class I.*—Cochrane and O'Dwyer, equal. *Class II.*—Skaife and Smith, equal. *Class III.*—None.

JUNIOR YEAR.—*Class I.*—Richard. *Class II.*—Busteed and Collins, equal. *Class III.*—Archbald, Hague, Waddell.

MATERIALS.

MIDDLE YEAR.—*Class I.*—O'Dwyer, Cochrane, McConnell. *Class II.*—Skaife, Robertson, Smith. *Class III.*—None.

JUNIOR YEAR.—*Class I.*—Busteed. *Class II.*—Archbald, Collins, Waddell. *Class III.*—Hague, Richard.

RAILWAY WORK.

SENIOR YEAR.—*Class I.*—Boulden and Hall, equal. *Class II.*—Foss (P. D.) and Swan, equal. *Class III.*—None.

MIDDLE YEAR.—*Class I.*—O'Dwyer. *Class II.*—Skaife. *Class III.*—None.

MOULDING AND CASTING (*Essay*).

MIDDLE YEAR.—*Class I.*—Cochrane and Smith (W. H. C.), equal. *Class II.*—None, *Class III.*—None.

APPLIED MECHANICS.

SENIOR YEAR.—*Class I.*—None. *Class II.*—Swan, Boulden, Hall. *Class III.*—Ross (P. D.).

MIDDLE YEAR.—*Class I.*—O'Dwyer, McConnell, Cochrane. *Class II.*—Smith (W. H. C.), Skaife. *Class III.*—Robertson (Wm. F.).

MACHINERY AND MILL-WORK.

SENIOR YEAR.—*Class I.*—Boulden, Hall, Swan. *Class II.*—Ross (P. D). *Class III.*—None.

MIDDLE YEAR.—*Class I.*—Cochrane. *Class II.*—Smith (W. H. C.), Skaife. *Class III.*—None.

GENERAL PAPERS (*Technical work*).

SENIOR YEAR.—*Class I.*—Swan, Hall, Boulden. *Class II.*—None. *Class III.*—Ross (P. D.).

MIDDLE YEAR.—*Class I.*—O'Dwyer, Cochrane. *Class II.*—McConnell and Smith (W. H. C.), equal. *Class III.*—Robertson, Skaife.

AGGREGATE CLASS LIST (*Professional Subjects.*)

Civil and Mechanical Engineering.

SENIOR YEAR.—*Class I.*—Boulden (The Skelton Prize), Hall, Swan. *Class II.*—None. *Class III.*—Ross.

MIDDLE YEAR.—*Class I.*—O'Dwyer (prize);—Cochrane (prize); *Class II.*—Smith, Skaife. *Class III.*—None.

JUNIOR YEAR.—*Class I.*—Busteed. *Class II.*—Archbald and Richard, equal; Collins. *Class III.*—Hague, Waddell.

MATHEMATICAL PHYSICS.

SENIOR YEAR.—*Class I.*—Boulden. *Class II.*—Swan, Ross (P. D.). *Class III*—Hall.

MIDDLE YEAR.—*Class I.*—O'Dwyer. *Class II.*—Smith. *Class III.*—Adams, Cochrane, Skaife.

MATHEMATICS.

SENIOR YEAR.—(*Analytic Geometry and Calculus*)—*Class I.*—Swan, Boulden. *Class II.*—None. *Class III.*—Ross (P. D.), Hall.

MIDDLE YEAR.—(*Analytic Geometry and Calculus; Optional Examination*). —*Class I.*—O'Dwyer. *Class II.*—None. *Class III.*—Smith, Cochrane.

SENIOR YEAR.—(*Spherical Trigonometry and Practical Astronomy.*) *Class I.*—Swan, Ross (P. D.) *Class II.*—Hall, Boulden. *Class III.*—None.

MIDDLE YEAR.—(*Ordinary Mathematics*)—*Class I.*—O'Dwyer, Smith. *Class II.*—Cochrane. *Class III.*—Robertson (W. F.), Skaife.

JUNIOR YEAR.—*Class I.*—None. *Class II.*—Archbald. *Class III.*—Richard, Collins, Waddell, Busteed.

EXPERIMENTAL PHYSICS.

SENIOR YEAR.—*Class I.*—Swan. *Class II.*—Adams, Boulden, Hall. *Class III.*—Ross (P. D.).

MIDDLE YEAR.—*Class I.*—O'Dwyer. *Class II.*—Cochrane. *Class III.*—Smith, Robertson (W. F.).

GEOLOGY.

SENIOR YEAR.—*Class I.*—Boulden, Swan, Ross, Hall. *Class II.*—None. *Class III.*—None.

HONOURS IN GRADUATING CLASS.—Adams.

HONOUR COURSE.—(*Mining Students*)—Rogers.

MIDDLE YEAR.—(*Mining Students*),—*Class I.*—McConnell. *Class II.*—Robertson. *Class III.*—None.

ZOOLOGY.

MIDDLE YEAR.—*Class I.*—McConnell (prize), O'Dwyer. *Class II.*—Skaife, Robertson. *Class III.*—None.

CHEMISTRY.

JUNIOR YEAR.—*Class I.*—None. *Class II.*—Archbald. *Class III.*—Busteed Waddell, Collins, Richard.

MINING COURSE.

MIDDLE YEAR.—(*Blowpipe Analysis*)—*Class I.*—McConnell (prize). *Class II.*—Rogers. *Class III.*—Robertson.

MIDDLE YEAR.—(*Assaying*)—*Class I.*—None. *Class II.*—McConnell. *Class III.*—Robertson.

SENIOR YEAR.—(*Mining*)—*Class I.*—None. *Class II.*—Rogers.

SENIOR YEAR.—(*Metallurgy*)—*Class I.*—None. *Class II.*—Rogers.

PRACTICAL CHEMISTRY COURSE.

SENIOR YEAR.—(*Metallurgy*)—*Class I.*—Adams. *Class II.*—None. *Class III.*—None.

SENIOR YEAR.—(*Assaying*).—*Class I.*—Adams (prize.) *Class II.*—None. *Class III.*—None.

ENGLISH LANGUAGE AND LITERATURE.

JUNIOR YEAR.—*Class III.*—Archbald, Busteed, Richard.

FRENCH.

SENIOR YEAR.—*Class I.*—Ross (prize). *Class II.*—Swan. *Class III.*—McConnell, Adams and Hall, equal.

MIDDLE YEAR.—*Class I.*—O'Dwyer. *Class II.*—Skaife. *Class III.*—Smith, Cochrane.

JUNIOR YEAR.—*Class I.*—None. *Class II.*—Richard, Hague. *Class III.*—Archbald, Collins and Waddell equal.

GERMAN.

SENIOR YEAR.—*Class I.*—None. *Class II.*—Boulden. *Class III.*—None.

MIDDLE YEAR.—*Class I.*—None. *Class II.*—None. *Class III.*—Robertson (W. F.)

PASSED FOR THE METEOROLOGICAL CERTIFICATE.

Class I.—Hall; Boulden and Ross, equal; Swan. *Class II.*—None.
Class III.—None.

MORRIN COLLEGE.

INTERMEDIATE EXAMINATION.

GREEK.—*Class I.*—Hemming. *Class II.*—Walker, Ferguson. *Class III.*—None.
LATIN.—*Class I.*—Hemming. *Class II.*—Ferguson, Walker. *Class III.*—None.
MATHEMATICS.—*Class I.*—None. *Class II.*—Hemming. *Class III.*—Walker, Ferguson.
LOGIC.—*Class I.*—None. *Class II.*—Hemming, Walker. *Class III.*—Ferguson.
ENGLISH LITERATURE.—*Class I.*—Hemming. *Class II.*—Ferguson, Walker.
FRENCH.—*Class I.*—Hemming, Ferguson. *Class II.*—Walker.

SUPPLEMENTAL EXAMINATIONS, 1877-8.

PASSED.

I.—September, 1877.

ARTS.

(*a*)—Supplemental Sessional Examination.

THIRD YEAR.—Blakely, McKillop, Sweeny, Wellwood.
FIRST YEAR.—Bennett, Campbell, Cook, Klock.

(*b*)—Supplemental in one Subject.

THIRD YEAR.—McLaren.
SECOND YEAR.—Craig.
FIRST YEAR.—Alguire, McIntyre.

DEPARTMENT OF APPLIED SCIENCE.

(*a*)—Supplemental Sessional.

JUNIOR YEAR.—Dudderidge, Power, Robertson (W. F.)

(*b*)—Supplemental in one Subject.

JUNIOR YEAR.—Smith.

II.—February 1878.

(Supplemental to Christmas Examinations.)

ARTS.

(*a*)—Supplemental in two or more Subjects.

FOURTH YEAR.—Pedley (C. S.), Sweeny, Taylor, Wellwood.
THIRD YEAR.—Mercer.
SECOND YEAR.—Bennet, Guertin.
FIRST YEAR.—Chaffee, Hay.

(*b*)—Supplemental in one Subject.

FOURTH YEAR.—Graham, McLaren.
SECOND YEAR.—Klock, Pillsbury.

DEPARTMENT OF APPLIED SCIENCE.

(*a*)—Supplemental in two or more Subjects.

SENIOR YEAR.—Boulden, Hall.
MIDDLE YEAR.—Robertson (W. F.).

(*b*)—Supplemental in one Subject.

MIDDLE YEAR.—Skaife.
JUNIOR YEAR.—Collins, Richard.

Scholarships and Exhibitions.

SESSION 1877-8.

I.—SCHOLARSHIPS (Tenable for Two Years).

Year of Commencement-	Name of Scholar.	Subject of Examination.	Annual Value.	Founder or Donor.
1876	Graham, J. H..	Science.	$125	W. C. MacDonald, Esq.
1876	Donald, J. T...	Science.	125	W. C. MacDonald, Esq.
1876	Ross, James....	Class. & Mod. Lan.	120	Chas. Alexander, Esq.
1877	McClure, Wm..	Science.	125	W. C. MacDonald, Esq.
1877	McConnell, R. G	Science.	125	W. C. MacDonald, Esq.
1877	Cross, Alex. S .	Class. & Mod. Lan.	125	W. C. MacDonald, Esq.
1877	Eadie, Robert..	Class. & Mod. Lan.	125	W. C. MacDonald, Esq.

II.—EXHIBITIONS (Tenable for One Year).

Name of Exhibitioner.	Academic Year.	Annual Value.	Founder or Donor.
Hunton, Sidney W.....	Second Year.	$125	W. C. MacDonald, Esq.
Darey, J. Herbert.....	"	125	W. C MacDonald, Esq.
Bull, H. J.....	"	125	W. C. MacDonald, Esq.
McKenzie, W. A.....	"	100	Mrs. Jane Redpath.
Falconer, Alexander.....	First Year.	125	W. C. MacDonald, Esq.
Ferguson, William A.....	"	125	W. C. MacDonald, Esq.
Jones, John E.....	"	100	Mrs. Jane Redpath.
Ami, Henry M.....	"	100	Governors.
Rogers, John H.....	"	100	T. M. Taylor, Esq.

Of the above, one Exhibition of $125, and one of $100, awarded in addition to the usual number, arise from resignations in the previous year.

Students of the University.

SESSION 1877-78.

McGILL COLLEGE.

FACULTY OF LAW.

Third Year.

Abbott, Harry, Montreal, Q
Adam, Joseph, St. Marie de Monnoir, Q
Beauchamp, Joseph, Montreal, Q
Beaudin, Simeon, Montreal, Q
Berthelot, Louis N., Montreal, Q
Bissonnette, Louis A., Montreal, Q
Brooke, Charles J., Richmond, Q
Crimmen, William J., Chatham, N.B
Cross, Alexander S., Montreal, Q
Crothers, R. A., (B.A.) Clarenceville, Q
Duffy, Henry T., (B.A.) Durham, Q
Faribeault, Joseph E., L'Assomption, Q
Fay, John E., Abercorn, Q
Gaudet, Oscar, St. Therese, Q
Graham, Dugald, Middlesex, O
Kavanagh, Henry J., Montreal, Q
Laviolette, Pierre B., Chateauguay, Q
Lanctot, Husmer, St. Constant, Q
Levy, Joseph C. E., Montreal, Q
McKinnon, Edmund, Sunnyside, P.E.I
McGoun, Archibald, (B.A.) Montreal, Q
Morin, Pierre A. St. Francis, Q
Migneault, Pierre B., Worcester, U.S
Morrison, Adelard, Napierville, Q
Perras, Francois X., St. Remi, Q
Taylor, Archibald, (B.A.) Montreal, Q

Second Year.

Bampton, George E., England.
Busteed, E. B., Danville, Q
Carter, George F., Montreal, Q
Chauret, Joseph A., " Q
Cornell, Zebulon E., Stanbridge, Q
Decary, Alderic Montreal, Q
Descarries, J. A., Montreal, Q
Duchesneau, A., St. Vincent de Paul, Q
Duncan, Alex. E., (M.A.) Montreal, Q
Ethier, Leandre, " Q
Fleet, Charles J., (B.A.) " Q
Lafontaine, Pierre, E. St. Edward, Q
Ledien, Leon, Montreal, Q
Leblanc, Albert, St. Chas. Richelieu, Q
Leet, Seth P., Danville, Q
Levasseur, Amable T. J., Quebec, Q
Leveillé, Alphonse, Montreal, Q
McLean, C. B., Scotland.
McNaughton, Peter J., Montreal, Q
Martineau, Paul G., " Q
Nantel, Bruno, " Q
Nicolls, Armine D., Lennoxville, Q
Pillett, Henry B., Montreal, Q
Ross, William L., " Q
Simard, Gamelin E., " Q
St. Jean, Edmund R., " Q
St. Julien, Jules A., Beauharnois, Q
Trudel, Bouthillier J., Montreal, Q
McGibbon, Robert D., (B.A.) " Q
Ritchie, William F., (B.A.) " Q
Buckley, John H. G., England.
Phinney, Guy C., Annapolis, N.S

First Year.

Alguire, John C., Cornwall, Ont.
Atwater, Albert W. (B.A.) Montreal, Q
Austin, Joseph E., " Q
Berthelot, Joseph B, " Q
Biron, Jean B. S., " Q
Bourque, Jean B. C., Vaudreuil, Q
Brakenridge, J. Wm., Perth, Scotland.
Boisvert, Onesime, St. Gabriel, Q
Campbell, John McC., Montreal, Q
Chartrand, Alfred J., Montreal, Q
Chandler, G. H., (B.A) Brome Corner, Q
Cooke, J. P., Drummondville, Q
Creighton, James G. A., Halifax, N.S
David, Arthur J., Montreal, Q
DeBeaumont, Alfred L., " Q
DeMartigny, Charles L., Montreal, Q
Doré, Pierre J., Laprairie, Q
Dorwin, Joseph A., Montreal, Q

DeMartigny, Richard L., Varennes, Q
Dugas, Francois O., Montreal, Q
Duff, John M. McK., " Q
Goyette, Gonzalve H. D., Beauharnois, Q
Guerin, Edwd. W. P., (B.A.) Montreal, Q
Hammond, Henry R., Chatham, Q
Hunter, Herbert S., Montreal, Q
Laplante, Jean B., St. Stanislas, Q
Lafleur, Eugene, (B.A) Montreal, Q
Lamirande, Alex., Ste. Cunegonde, Q
Jackson, Samuel W., Montreal, Q
Madore, Camille, N. Dame de Graces, Q
McArthur, Hugh C., N. Georgetown, Q
McDonnell, Andrew, Montreal, Q
McLennan, William, Montreal, Q
McKercher, John, " Q
Montgomery, Donald, Charlottetown, P.E.I
McPhee, Kutusoff N., (B.A.) Montreal, Q
Nigalls, Allen G., Granby, Q
O'Heir, James H. I. E., Montreal, Q
Painchaud, Joseph F. " Q
Reddy, William B. S., " Q
Robillard, Clejus J., " Q
Sharp, William P., London, England.
Weir, Robert, Montreal, Q
White, Robert S., " Q

FACULTY OF MEDICINE.

Ambrose, Thomas Montreal, Q
Argue, Henry A. Corning, N. Y
Balleray, Geo. H., M.D. Paterson, N. J
† Beckstead, Morris Grantly, O
Beer, Chas. N. Charlottetown, P. E. I
Beers, William G. Montreal, Q
† Bell, Robert Montreal, Q
Bell, William D. Ottawa, O
Brown, James L. Chesterfield, O
Browne, Thomas L. Ottawa, O
Burwash, Henry J. St. Andrews, Q
Butler, Billa F. Stirling, O
Cahalan, James Wyandotte, M
† Cameron, John D. Williamstown, O
Carman, John B. Iroquois, O
Carman, Philip E. Iroquois, O
Carson, John H. Port Hope, O
† Chisholm, Alex. Lochiel, O
Chisholm, Murdoch Loch Lomond, N. S
Church, Frederic W. H. Aylmer, Q
Church, John J. R. Aylmer, Q
† Collison, Robert Matilda, O
Cormack, William Guelph, O
Cowley, Daniel K. Ottawa, O
Cuzner, Mark R. Aylmer, Q
Dafoe, Victor Aultsville, O
Derby, William J. North Plantagenet, O
Dibblee, Geo. O. St. Stephens, N. B
Drummond, William H. Montreal, Q
Dulmage, W. R. Smith's Falls, O
Dunlop, Alex. H. Pembroke, O
† Faulkner, Daniel W. Holloway, O
Feader, Henry C. Iroquois, O
Fenwick, Charles S. Montreal, Q
Fielde, Edmund C. Prescott, O
† Fortier, Louis A. River David, Q
Fraser, Henry D. Pembroke, O
† Frazer, John R. Hawkesbury, O
Fritz, Emdom Windsor, N. S
† Gardner, Henry H. Orillia, O
† Gibson, William B. Dunham, Q
Gordon, Chas. M. Ottawa, O
Gray, Thomas Brucefield, O
Grey, William L. Pembroke, O
† Greenwood, Fred. S., St. Catherines, O
Groves, George H. Carp, O
† Guerin, James J. E. Montreal, Q
Gurd, David F. Montreal, Q
Hanna, Franklin Harlem, O
Hart, George C. Osnabruck Centre, O
Harvie, John B. Ottawa, O
Heard, Chs. D. Charlottetown, P.E. I
Higginson, Henry A. L'Original, O
Henderson, Andrew Montreal, Q
Henwood, Alfred J. Brantford, O
Herdman, B. F. W. Aylmer, Q
Heyd, Herman E. Brantford, O
† Howey, William H. Delhi, O
Hunt, John J. Lambeth, O
† Hutchinson, John A. Bluevale, O
Imrie, Andrew W. Spencerville, O
Inksetter, David G. Copetown, O
Irwin, John L. Ottawa, O
Jackson, Jos. A., M.D. Lawrence, N. Y
Jamieson, Charles J. Ottawa, O
Josephs, George E. Pembroke, O
Klock, Robert H. Eardley, Q
Kirk, George W. Cornwall, O
Labelle, Martin St. Martin, Q
Lang, William A. St. Marys, O
Laurin, Joseph E. Montreal, Q
Lawford, John B. Montreal, Q
Lefevre, John M. Toronto, O
Lloyd, Hoyes W. Strathroy, O
Lunam, Henry B. A. Litchfield, Q
Lyford, Charles C. Roscoe, Ill.
Maas, Rudolph J. Negaunee, Mich.
Macdonald, Alex. Paisley, O
Macdonald, Malcom C. Glencoe, O
Macdonald, Robert C. Perth, O
Macdonald, Robt. T. E. Montreal, Q
Mattice, James S. Massena, N. Y
McArthur, John A. Underwood, O
† McCann, John J., B.A., Millbury, Mass
McCorkill, Robert K. C. G. Montreal, Q
† McCrimmon, John Woodville, O
† McCrimmon, Milton Ancaster, O
McCullough, George St. Mary's, O
McCully, Oscar J. Sussex, N. B
McDonald, John A. Panmure, P. E. I

McEachran, William Montreal, Q
McEvenue, John E. Montreal, Q
McGannon, Edward A. Prescott, O
McGillis, William C. Montreal, Q
† McKinley, John K. Perth, O
McGuigan, William J. Stratford, O
McKay, James Ottawa, O
McKenzie, Kenneth Melbourne, Q
McKenzie, Barth. E., B. A. Aurora, O
McLain, George Nanticoke, O
McLaren, David C. Montreal, Q
McNee, Stuart Perth, O
† McNeill, Ernest Cavendish, P. E. I
McNulty, Michael Iroquois, O
Menzies, John B. Almonte, O
Mignault, Louis D., B.A., Montreal, Q
† Mills, Thomas W., M.A., Hamilton, O
Moore, William Derby, O
Musgrove, Wm. J. West Winchester, O
† Neilson, William J. Perth, O
O'Callaghan, Ths. A., B.A. Worcester, M
Page, Thomas A. Brockville, O
Perks, William C. Port Hope, O
Pinsonneault, Bernard Montreal, Q
Poaps, Allen P. Osnabruck Centre, O
Poole, Henry E. Wakefield, Q
Prendergast, Walter J. Ct. desNeiges, Q
Prieur, Joseph A. St. Zotique, Q
Prime, Merrill F. Knowlton, Q
Prime, William R. Knowlton, Q
Pringle, Alex. F. Cornwall, O
Pulford, Frederick W. Windsor, O
Quinones, Elenterio Porto Rico, W. I
Reynolds, Thomas W. Brockville, O
Riley, Oscar H. Franklin, Vt.
Rogers, Ed. J. Peterboro, O
Riordan, Bruce L. Port Hope, O
Ross, George T. Montreal, Q
Ross, John W. Winthrop, O
Rutherford, Martin C. Waddington, N Y
Ross, James De Wittville, Q
Ruttan, Allen M. Napanee, O
Scott, John G. Ottawa, O
Serviss, Thos. W. Iroquois, O
† Setree, Edward W. Prescott, O
Seymour, Maurice M. Chesterville, O
Shanks, James C. Huntingdon, Q
Shaw, William F. Ottawa, O
Shaver, Robert Williamstown, O
Shufelt, William A. Browne, Q
Skeffington, Joseph M. Arlington, Ill.
Small, Henry B. Ottawa, O
Smiley, Jonathan St. Lambert, Q
† Smith, Daniel F. Listowell, O
Smith, Edward H. Montreal, Q
Smith, John Torbolton, O
Snow, Walter H. Dundas, O
Spencer, Richmond Montreal, Q
† Stafford, Frederick I. R. Montreal, Q
Stevenson, Hans. Wakefield, Q
Stewart, James O. St. Anicet, Q
Struthers, Alex. D. Philipsburg, Q
Struthers, Robert B. Philipsburg, Q
Sutherland, William R. Montreal, Q
Tupper, Freeman Milton, N. S
† Vineberg, Hiram N. Montreal, Q
Wagner, Geo. C. Dickenson's Landing, O
Weageant, Clar. A. Gallingertown, O
† Webster, Arthur D. Kentville, N. S
Williston, Hedley V. Newcastle, N. B
Wolcott, Joseph A. Keesville, N. Y
† Wright, John W., B.A. Cressy, O
† M. D. C. M. 1878.

FACULTY OF ARTS.

Undergraduates in Arts.

First Year.

Ami, Henry Mark Ottawa, O
Black, Charles Granby, Q
Bracq, John C. Grand Ligne, Q
Chaffee, Azro B. Montreal, Q
Duncan, William T. Granby, Q
Elder, John Huntingdon, Q
Falconer, Alexander, Montreal, Q
Ferguson, William A., Richibucto, N.B
Gamble, Robert Billing's Bridge, O
Hay, William Paisley, O
Jones, John E. Digby, N.S
Lawford, Charles A. Montreal, Q
Lyman, Walter E. Montreal, Q
McGibbon, Alexander Montreal, Q
McGregor, Wm. D. Cote des Neiges, Q
McLeod, Alvan Brooklyn, N.S
MacLeod, Archibald Orwell, P.E.I
Macpherson, Kenneth R. Montreal, Q
Muir, J. M. C. Montreal, Q
Powell, Gregory John Guelph, O
Robertson, George Garafraxa, O
Rogers, John H Huntingdon, Q
Rutherford, Alexander C. Ormond, O
Scott, Frederick G. Montreal, Q
Townsend, John Atkinson Billing's Bridge, O
Weir, Frank Montreal, Q
White, William John Montreal, Q

SECOND YEAR.

Alguire, John C.	Cornwall, O	Klock, Robert A.	Aylmer, Q
Ami, Samuel T.	Ottawa, O	Lafleur, Paul T.	Montreal, Q
Bayne, George D.	Montreal, Q	Larivière, Vitalien	Roxton Falls, Q
Bennet, James	Montreal, Q	McIntyre, Hector A.	Manilla, O
Bull, Harcourt J.	Montreal, Q	McKenzie, William A.	Lanark, O
Campbell, Lorne	Montreal, Q	Meighen, W. A.	Perth, O
Cook, Charles R.	Hemmingford, Q	Molson, Charles A.	Montreal, Q
Craig, James A.	Fitzroy Harbour, O	Muir, A. C.	North Georgetown, Q
Cunningham, Thomas E.	Montreal, Q	Ogilvie, Arch.	North Georgetown, Q
Currie, Dougald	Crinan, O	Pillsbury, Carroll E.	Augusta, M., U.S
Darey, J. Herbert	Montreal, Q	Raynes, Charles	Montreal, Q
Guertin, Alfred L.	Acton, Q	Roberts, George F.	Montreal, Q
Hunton, Sidney W.	Ottawa, O	Scriver, Charles W.	Hemmingford, Q
Keays, Charles H.	Hamilton, O		

THIRD YEAR.

Cross, Alexander S.	Huntingdon, Q	McKibbin, Robert	Montreal, Q
Eadie, Robert	Oakland, Q	Mercer, Walter D.	Montreal, Q
Howard, Robert J. B.	Montreal, Q	Phinney, Guy C.	Wilmot, N.S
Lane, Campbell	Montreal, Q	Redpath, William W.	Montreal, Q
Lighthall, William D.	Montreal, Q	Robertson, H. McN.	Barrington, N.S
McClure, William	Lachute, Q	Stevens, William H.	Manilla, Q
McConnell, Richard G.	Chatham, Q	Wood, Holton H.	Montreal, Q

FOURTH YEAR.

Blakely, Malcolm D.	Bristol, Q	Newnham, Jarvois A.	Montreal, Q
Donald, James T.	Montreal, Q	Pedley, Charles S.	Coldsprings, O
Dawson, Rankine	Montreal, Q	Ross, James	Dewittville, Q
Ewing, William	Melbourne, Q	Stewart, Wm. S.,	Charlottetown, P.E.I
Graham, John H.	Ormstown, Q	Sweeny, James F.	Montreal, Q
Guerin, Edmund	Montreal, Q	Taylor, Edward T.	Montreal, Q
Lyman, A. Clarence	Montreal, Q	Thornton, Hastewell W.	New Richmond, Q
McFadyen, Allan L.	Brock, O	Torrance, Frederick	Montreal, Q
McKillop, Ronald	Inverness, Q	Wellwood, James	Cote des Neiges, Q
McLaren, David C.	Montreal, Q		

Department of Practical and Applied Science.

JUNIOR YEAR.

Archbald, A. Henry	Montreal, Q	Nelson, Wolfred (M.D),	Montreal, Q
Busteed, F.	Montreal, Q	Richard, Louis N.	Montreal, Q
Collins, John J.	Manotick, O	Stephen, George C.	Montreal, Q
Hague, Lawrence	Montreal, Q	* Waddell,	Cobourg, O

MIDDLE YEAR.

Cochrane, Wm. F.	Montreal, Q	Robertson, Wm. F.	Montreal, Q
Dudderidge, James	Lachute, Q	Skaife, Wilfred T.	Montreal, Q
(3) McConnell, Richard G.	Chatham, Q	Smith, Wm. H. C.	Montreal, Q
O'Dwyer, J. S.	Granby, Q	* Evans.	Chelsea, Q
Power, John P.	Barrie, O		

(3) *Attending in Third Year (Arts) also.*

SENIOR YEAR.

Adams, Frank	Montreal, Q	(*a*) Ord, Lewis R.	Montreal, Q
Boulden, Charles M.	Millersburgh, Ky. U.S	Rogers, R. B. (*Ba. Ap. S.*)	Ashburnham, O
(*a*) Broad, Wallace	Montreal, Q	Ross, Philip D.	Montreal, Q
Hall, Richard	Gatineau Mills, Q	Swan, John	Montreal, Q

* *Partial.* (*a*) *Occasional.*

Partial and Occasional.

Allard, G. H.	
Allen, James E.	
* Anderson, Alex.	Billingsbridge, O
* Argue, Henry A.	Corning, N.Y., U.S
Arthur, Robert B.	Hillier, O
Balmer, R. H.	Toronto, O
Barltrop, A. J.	Walkerton, O
* Bayne, George Thos.	Nepean, O
Bland, S. G., (B.A.)	Quebec, Q
Bowers, Alfred A.	Kincardine, O
Brakenridge, J. W.	Montreal, Q
* Burland, Jeffrey H.	Montreal, Q
Camerle, Omer	Montreal, Q
Cameron, David G.	Metcalfe, O
Clipsham, John W.	St. Lambert's, Q
* Coates, John D.	Newmarket, O
Donaldson, John G.	Osgoode, O
Dow, James	Montreal, Q
* Dyer, Wm. Thos.	Cornwall, Eng.
* Ford, James E.	Peterborough, O
Geddes, Wm. H.	Ottawa, O
Gordon, Rev. John	Montreal, Q
Gould, Charles H., (B.A.)	Montreal, Q
Grieve, H. D.	Montreal, Q
Henderson, John C.	Brantford, O
* Henry, John	Montreal, Q
Hitchcock, G.	Massawippi, Q
Horne, Thomas H.	Montreal, Q
* Hyde, Richard	Montreal, Q
Knechtel, Valentine	Brussels, O
Mallory, D. E.	Mallorytown, O
Matheson, John	Montreal, Q
McCunn, Drummond	Montreal, Q
McFarland, James	Ottawa, O
McKechnie, Robert W.	Bristol, Q
McLachlen, James A.	Exeter, O
McLean, Charles,	High Branch, P.E.I
McLeod, J. R.	Bruce, O
McNabb, Robert	Woodville, O
* Mitchell, John	Montreal, Q
Munro, J.	Valleyfield, P.E.I
* Orme, T. H.	Birr, O
Ross, H. J.	Ottawa, O
Saer, John B.	Montreal, Q
Scriver, J. F.	Hemmingford, Q
Shearer, Wm.	Ottawa, O
Shortis, James	Three Rivers, Q
Sliter, Thomas	Lansdowne, Q
Taylor, S. J.	Cartwright, O
Walker, G. F.	Waddington, O
Willett, G.	Toronto, O
Wright, James C.	Clifford, O
York, Alexander	Metcalfe, O

* *Partial.*

MORRIN COLLEGE.

FACULTY OF ARTS.

Undergraduates.

Bowen, William	Quebec, Q.	Laird, John	Quebec, Q.
Duclos, Charles	Quebec, Q.	Paterson, James T.	Windsor, Q.
Ferguson, James D.	Quebec, Q.	Seymour, Silas	Quebec, Q.
Gibb, James S.	Quebec, Q.	Tregett, George	Quebec, Q.
Hemming, Henry	Montreal, Q.	Walker, Edward G.	Quebec, Q.
Hewett, James	Quebec, Q.		

besides 35 Occasional Students.

SUMMARY.

Students in Law, McGill College,		100
" in Medicine "		161
" in Arts "	Undergraduates,	107
	Partial and Occasional,	57
" " Morrin College,	Undergraduates,	11
	Occasional,	35
Total number of Students,		471
Deduct entered in two Faculties,		4
		467
Teachers in training in Normal School,		125
Pupils in Model Schools,		350
Total Students and Pupils,		942

Passed the University Examinations.

SESSION 1877-8.

FACULTY OF LAW.

PASSED FOR THE DEGREE OF B. C. L.*

Abbott, Harry.
Adam, Joseph.
Brooke, C. J.
Beaudin, Simeon.
Bissonette, Louis A.
Beauchamp, Jos.
Berthelot, Louis H.
Crimmen, U. J.
Crothers, R. A., B.A.
Cross, A. S.
Duffy, Henry T., B.A.
Faribeault, Joseph E.
Fay, John E.
Graham, Dugald.
Gaudet, Oscar.
Kavanagh, H. J.
Lanctot, Husmer.
Levy, J. C. E.
Laviolette, Pierre B.
Migneault, Pierre B.
McGoun, Archibald, B.A.
McKinnon, Edmund.
Morrison, Adelard.
Morin, Pierre A.
Perras, Frs. X.
Taylor, A. Dunbar, B.A.

FACULTY OF MEDICINE.

PASSED FOR THE DEGREE OF M.D., C. M.*

Beckstead, Morris.
Bell, Robert.
Cameron, John D.
Chisholm, Alexander.
Collison, Robert.
Faulkner, Daniel W.
Fortier, Louis A.
Fraser, John R.
Gardner, Henry H.
Gibson, William B.
Greenwood, Fred. S.
Guerin, James F.
Hutchinson, John A.
Howey, Wm. H.
McCann, John J., B.A.
McCrimmon, John.
McCrimmon, Milton.
McKinley, John K.
McNeill, Ernest.
Mills, Thos. W., M.A.
Neilson, Wm. J.
Setree, Edward W.
Smith, Daniel F.
Stafford, Fred. J.
Vineberg, Hiram N.
Webster, Arthur D.
Wright, John W. B.A.

PASSED THE PRIMARY EXAMINATION.*

Brown, J. L.
Burwash, Henry J.
Butler, Billa F.
Carman, Philip E.
Carman, John B.
Chisholm, Murdoch.
Feader, Henry C.
Gray, Thomas.
Groves, George H.
Gurd, David F.
Hart, George C.
Hanna, Franklin.
Heard, Chas. D.
Henwood, Alfred J.

* Arranged Alphabetically.

Imrie, Andrew W.
Inksetter, David G.
Jackson, Joseph A.
Jamieson, Chas. J.
Lawford, John B.
Lefevre, John M.
Lloyd, Hoyes W.
Lyford, Chas. C.
McArthur, John A.
McCully, Oscar J.
McCullough, George.
McEachran, William.
McGuigan, William J.
McNee, Stuart.
Menzies, John B.
Scott, John G.
Seymour, Maurice M.
Shaw, William F.
Small, Henry B.
Smith, John.
Spencer, Richmond.
Smiley, Jonathan.
Stevenson, Hans.
Sutherland, William R.
Weagand, Clarence A.
Williston, Hedley V.

PASSED IN ANATOMY.

Riordan, Bruce L.
McCorkill, R. R. C.
Ambrose, Thomas.
Poole, Henry E.
McEvenue, John E.

PASSED IN PHYSIOLOGY.

Ambrose, Thomas.
McCrimmon, Milton.
Pringle, Alex. F.
Poaps, Allan F.
Riordan, Bruce L.

PASSED IN CHEMISTRY.*

Browne, T. L.
Church, F. W.
Church, John J.
Cowley, D. K.
Cahalan, James.
Dibblee, G. O.
Dulmage, Wm.
MacDonald, R. T. E.
McCorkill, R. R. C.
McNulty, M.
Maas, R. J.
Pringle, A. F.
Pulford, F. W.
Smith, E. H.
Stewart, J. O.
Serviss, T. W.
Ross, G. T.
Ruttan, A. M.
Riordan, B. L.

PASSED IN MATERIA MEDICA.*

Ambrose, Thomas.
Brown, Thos. L.
Church, F. W.
Dulmage, Wm. R.
Henderson, Andrew.
MacDonald, R. T. E.
McGannon, E. A.
Mignault, Louis D.
Prendergast, W. J.
Ruttan, Allan M.
Stewart, James.

PASSED IN BOTANY.

Class I.

Rogers, E. J. } 1st Prize
Gordon, C. M. }
Carson, J. H. 2nd Prize.
Perks, W. C.
Moore, W.
Joseph, S. E.
McKenzie, K.
Heyd, J. E.
Ross, J. W.
Gray, W. L. } equal.
Reynolds, T. W. }
O'Callaghan, T. A.
Struthers, A. D.
Shanks, J. C.
Cressey, N. L.
Fritz, E.

* Arranged Alphabetically.

Class II.

Fields, E. C.
Shufelt, W. A.
Snow, W. H.
McKay, J.
Struthers, R.B.
Hunt, J. J.
Derby, W. J.
McLain, G.
Harvie, J. B.
Lang, W. A.
Cormack, W.
Klock, R. H.
Parkinson, G. H.
Laurin, E.
Higginson, H. A.

Class III.

Chisholm, M.
Tupper, T.
Fraser, H. D.
Dunlop, A. H.
Cummings, P.
Beer, C.
Skeffington, J. M.
Harris, A.
Wagner, G. C.
Cuzner, M. R.
Brown, M. S.
Drummond, W. H.
Pringle, A. F.
Shaver, R.
Dafoe, V.
McDonald, A.
Jackson, J. A.
Jakeman, M.
White, E.

FACULTY OF ARTS.

PASSED FOR THE DEGREE OF B.A.

In Honours.

(Alphabetically arranged).

First Rank.—Donald, James T.
Guerin, Edmund W. P.
Pedley, Charles S.
Ross, James.
Stewart, William S.
Thornton, Hastewell W.

Second Rank.—Dawson, Rankine.

Ordinary.

(In order of Merit).

Class I.—Newnham, Jarvois A.
Lyman, Clarence A.
Graham, John H.

Class II.—Torrance, Frederick W.
McFadyen, A. L.
Blakely, Malcolm D.

Class III.—McKillop, Ronald.
McLaren, D. C. } equal.
Taylor, Edward T. }
Wellwood, James.
Ewing, William.
Sweeny, James F.

PASSED THE INTERMEDIATE EXAMINATION.

(1) *McGill College.*

Class I.—DAREY, HUNTON, MCKENZIE, CURRIE, BULL, KEAYS, LAFLEUR.

Class II.—RAYNES, ROBERTS, MOLSON, CUNNINGHAM, OGILVIE, LARIVIERE, BAYNE (G. D.), PILLSBURY, BENNETT, CRAIG, SCRIVER.

Class III.—MUIR (A. C.), MCINTYRE.

(2) *Morrin College.*

Class I.—HEMMING.

Class II.—FERGUSON, WALKER.

PASSED FOR THE DEGREE OF BACHELOR OF APPLIED SCIENCE.

Course of Civil and Mechanical Engineering.

(In order of Merit.)

BOULDEN, CHARLES M.
SWAN, JOHN.
HALL, RICHARD.
ROSS, PHILIP D.

Course of Practical Chemistry.

ADAMS, FRANK.

BACHELOR OF APPLIED SCIENCE TAKING ADDITIONAL STANDING OF MINING ENGINEER.

ROGERS, (RICHARD B.) BAC. AP. SC.

BACHELOR APP. SCIENCE PROCEEDING TO THE DEGREE OF MASTER OF ENGINEERING.

MCLEOD (C. H.), BAC. AP. SC.

Graduates of the University.

DOCTORS OF DIVINITY.

* Bethune, Rev. John, (ad eundem) 1843. * Falloon, Rev. Daniel, [Hon.]. 1844

DOCTORS OF LAWS AND OF CIVIL LAW.

* Abbott, Christopher, B. C. L. [D. C. L., in course].....1862
Abbott, Hon. J. J. C., B. C. L., [D. C. L., in course].....1867
* Adamson, Rev. Wm. A., [D.C.L., hon].....1850
Badgley, Hon. Wm. [D. C. L., hon].....1843
* Bancroft, Rev. C., D.D. [LL.D. hon].....1870
Blackwood, Right Hon. Frederick Temple Hamilton, Earl of Dufferin, [LL.D. hon.].....1878
Bond. Rev. Wm., M.A. [LL.D. hon]...1870
Browne, Dunbar, M. A., B. C. L. [D. C. L. in course].....1871
Campbell, George W., M. A., M.D, [LL.D. hon].....1875
Chamberlin, B., M.A., B. C. L. [D. C. L. in course].....1867
hauveau, Hon. Pierre J. O., [LL.D. hon].....1857
Cordner, Rev. John, [LL.D. hon]...1870
Cornish, Rev. George, M.A., [LL.D. in course].....1872
Davidson, Charles Peers, M.A., B.C.L. [D. C. L. in course].....1875
* Davies, Rev. Benjamin, Ph. D. [LL.D. hon].....1856
Dawson, John William, M. A., [LL.D. hon].....1857
DeSola, Rev. A., [LLD. hon].....1858
Douglas, Rev. Geo. [LL.D. hon]...1870
Doutre, Gonsalve, B.C.L. [D.C.L. in course].....1873
* Falloon, Rev. D., D.D., [LL.D. hon].....1862
Gilman, Francis E., M.A., B.C.L. [LL.D. in course].....1877
Girouard, Desiré, B.C.L., [D.C.L. in course].....1874
* Head, Right Hon. Sir Edmund W., Baronet, M.A. [LL.D. hon]..1862
Hemming, Edward, J., B.C.L., [D.C.L. in course].....1871
* Holmes, Andrew F., M. D., [LL.D. hon].....1858
Howe, Henry A., M.A., [LL.D. hon].....1870
Hunt, T. Sterry, M.A., [LL.D. hon].....1865
Kerr, William H. [D. C. L. in course].....1873
Kirby, James, M. A., B. C. L. [D. C. L. in course] [LL. D. in course].....1874
Laflamme, R. G., B.C.L. [D.C.L. in course].....1873
Lawson, G., Ph. D., [LL.D. hon]...1862
* Lafrenaye, P.R., B.C.L., [D.C.L. in course].....1873
Leach, Rev. Wm. T., M. A., [D.C.L. hon].....1849
[LL.D. hon].....1857
* Logan, Sir William E., Kt. [LL.D. hon].....1856
* Lundy, Rev. Francis, [D.C.L. hon].....1843
Lyall. Rev. W., [LL.D. hon].....1864
MacVicar, Rev. D.H., [LL.D. hon]..1870
Meredith, Edmund A., B.C.L., [LL.D. hon].....1857
Miles, Hy. H., M.A., [LL.D. hon]..1866
Morris, Alexander, M.A., B.C.L. [D.C.L. in course].....1862
Rollitt, Albert K., LL.D., London Univ. [LL.D. ad eum].....1871
* Smallwood, Charles, M.D., [LL.D. hon].....1856
* Smith, William, [LL.D. hon].....1858
* Vallieres, de St. Real, Hon. J. R. [D.C.L. hon].....1844
Wickes, Rev. W. D., [LL.D. hon]...1868
Wilkes, Rev. Henry, M.A., D.D., [LL.D. hon].....1870

* Deceased.

DOCTORS OF MEDICINE.

Adsetts, John.....1866
Alexander, Robt. A.....1871
Alguire, Duncan O.....1874
† Allen, Hamilton.....1872
Alloway, Thomas Johnson.....1869
Anderson, Alexander.....1866
* Anderson, John C.....1865
Archer, Thomas.....1869
Ardagh, Johnson.....1869
Armstrong, George E.....1877
* Arnoldi, Daniel.....[Hon].....1847
Atkinson, Robt.....1862
Ault, Alexander.....1860
Ault, Charles.....1855
Ault, James F.....1854
Ault, Edwin D.....1868
Austin, Fred. John.....1862
Aylen, John.....1857
Aylen, James.....1863
Backhouse, John B.....1870
Bain, D.S.E., Staff Surgeon Maj...1868
Bain, Hugh U.....1875
Baird, James.....1870
Baker, Albert.....1848
Barclay, George.....1870
* Barnston, James.....[ad eun].....1856
Battersby, Charles.....1861
Baynes, Donald, M.A.....1876
Baynes, George Aylmer.....1869
Beattie, David.....1862
Beaudet, Alfred.....1865
Beaudry, Lewis H.....1871
Beckstead, Morris.....1878
† Bell, James.....1877
* Bell, John M.A.....1866
Bell, Robert.....1878
Bell, Robt. W.....1873
Bellew, Alfred.....1852
* Bergeron, Joseph.....1870
Bergin, Darby.....1847
Bessey, William E.....1863
Bender, Prosper.....1865
Benson, Joseph B.....1875
Bibeau, Jean G. J.....1843
Blackader, Alex. D., B.A.....1871
Blacklock, John J.....1851
* Blanchet, J. B.....1863
Blair, Robt. C.....1865
* Bligh, John W.....1865
Bogart, Irvine.....1859
Bomberry, Geo. E.....1875
Boulter, George Henry.....1852
* Boyer, Lewis.....1842
* Boylan, Andrew A.....1857
Boyle, Albert D.....1877
* Bowman, William Edward.....1860
Bower, Silas J.....1865
* Bradley, William.....1869
Brathwaite, Francis H.....1863
Brandon, John.....1867
Breslin, William Irwin, Asst. Surgeon, 46th Regiment of Line...1847
Brigham, Josiah S.....1848
Brissette, Henry R.....1871
Bristol, Ames S.....1850
Brodeur, Alphonse.....1863
Brodie, John.....1877
Brooks, Samuel T.....1851
Brouse, William H.....1847
Brouse, Jacob E.....1861
Brossard, J. B. J.....1875
Brown, Peter E.....1863
Brown, Harry.....1873
Browne, Arthur A., B.A.....1872
Bruneau, Adolphe.....1853
* Bruneau, Oliver T.....[Hon].....1843
Bruneau, Onesime.....1851
Bryson, William G.....1867
Bucke, Richard Maurice.....1862
Bucke, Edward H.....1852
Buckle, John M. C.....1869
Buckley, William P.....1870
Bull, George Joseph.....1869
Bullen, Charles F.....1864
Burgess, John A.....1868
Burch, Benjamin T.....1865
Burland, John H.....1863
Burland, Samuel C.....1877
Burland, William B.....1872
Burland, William H.....1876
Burrows, Philip.....1866
Burnham, Robert Wilkins.....1860
Burns, Alfred J.....1854
Burritt, Horatio C.....1863
Butler, George C.....1865
* Buxton, John N.....1849
Cameron, Duncan H.....1877
Cameron, James C.....1874
Cameron, John D.....1878
Campbell, Donald Peter.....1862
Campbell, Francis Wayland.....1860
Campbell, G. W., M.A...[ad eun].....1843
Campbell, James.....1876
* Campbell, Samuel.....1866
Campbell, John.....1869
Cannon, Gilbert.....1877
Carmichael, Duncan A.....1873
Carey, Augur D. L.....[ad eun]...1864
Cassidy, David M.....1867
Cassidy, John F.....1865
Carroll, Robert W. W.....1859
Carson, Augustus.....1843
Carson, John.....1866
Carter, Samuel A.....1859

Casgrain, Charles E.....1851
Cattanach, Andrew J.....1871
Chagnon, Vinceslaus G. B.....1861
* Challiner, Francis.....1849
Cherry, William.....1869
* Chesley, George Ashbold.....1862
Chevalier, Gustave.....1860
Chevalier, Napoleon E.....1873
Chipman, Clarence J. H., B.A.....1868
Chisholm, Alex.....1878
Christie, George H.....1874
Christie, John B.....1865
Christie, Thomas.....1848
Christie, John H.....1875
* Church, Charles Howard.....1862
Church, Clarence R.....1867
Church, Coller M.....1855
Church, Levi R.....1857
Church, Mills Kemble.....1864
* Church, Peter H.....1846
Clark, Octavius H. E.....1870
Clark, Wallace B.A.....1871
Clark, Richard A.....1870
Clark, Fincastle G. B.....1876
Clemesha, John Wordsworth.....1867
Clement, Victor A.....1869
*† Cline, John D., B.A.....1874
Cluness, Daniel.....1870
Codd, Alfred.....1865
Collins, Charles W.....1869
Collison, Robert.....1878
Colquhoun, George.....1876
Comeau, John B.....1870
Cook, Guy R.....1876
Cooke, Charles H.....1866
Cooke, Herman L.....1867
Cooke, Sidney P.....1869
Cooke, William H.....1876
Copeland, William L.....1872
Corbett, Augustus M.....1854
Corbett, William H.....1854
Corlis, Josiah.....1869
Cotton, C. L.....1878
* Cowley, Thomas McJ.....1870
Cox, Frank.....1869
Coyle, Henry W.....1876
Craig, Thornton.....1876
Craik, Robert.....1854
Cram, Daniel C.....1872
* Crawford, James..... [ad eun]...1854
Cream, Thomas N.....1876
Crichton, Stuart.....1865
Crothers, William.....1876
* Culver, Joseph R.....1848
* Cunynghame, W. C. Thurlow.....1858
Cutter, Frederick A.....1873
Daly, Guy D F.....1868
Dansereau, Charles.....1842
Dansereau, Charles.....1869
Dansereau, Pierre.....1855
D'Avignon, Fred. F.....1871
* Dease, Peter Warren.....1847
DeBonald, W S.....1862
DeBoucherville, Charles B.....1843
DeGrosbois, T. B.....1860
Demorest, Durham, G. G.....1852
Desaulniers, Antoine A.....1863
DeCelles, Charles D.....1841
Depuis, Joseph G. P.....1856
Dice, George.....1864
* Dick, James R.....1842
Dickinson, James J.....1846
* Dickinson, George.....1867
Dickson, William W.....1863
Digby, James Winniett.....1866
Dodd, John.....1843
Donnelly, Charles H.....1866
* Dorion, Severe.....1843
* Dorland, Enoch P.....1850
Dorland, James.....1875
Dougan, William.....1867
Douglass, James.....[Hon].....1847
Dowling, John F.....1875
Drake, Joseph M.....1861
Dubuc, Charlemange.....1864
* Duckett, Stephen.....1853
Duckett, William A.....1859
Dufort, Thadee A.....1865
Duhamel, Louis.....1860
Duncan, George.....1866
Duncan, Gideon M.....1871
Duncan, George C.....1875
Duncan, James S.....1853
* Duncan, John.....1871
* Dunn, William Oscar.....1843
Dunsmore, John M.....1870
Easton, John.....1852
Eberlé, Harry A.....1876
Edwards, Eliphalet G.....1855
Edwards, Oliver C.....1873
Elkinton, Arthur G., Asst. Surgeon Scots Fusileer Gnards.....1862
Ellison, Saram R.....1873
Emery, Gordon J.....1857
Emery, Allard.....1866
English, T. F.....1858
Erskine, John.....1860
Ethier, Calixte.....1867
Evans, Griffith.....1864
Ewing, William.....1874
Falkner, Alexander.....1866
Fall, Samuel R.....1875
Farewell, G. McGill.....1872
Farewell, W. G.....1868
Farley, James T.....1877
Farley, John J.....1873
Faulkner, George W.....1871
Faulker, D. W.....1878
Fenwick, George Edgeworth.....1847
Fergusson, Alexander A.....1861
Fergusson, Alex. A.....1866
* Finlayson, John.....1834
Finnie, John T.....1869
*Fisher, John.....1848
Fitzgerald, James.....1865
Fortier, Louis A.....1878

Fortin, Pierre.....1845
Fortune, Lewis M.....1873
* Foster, Stephen Sewell.....1846
Farleigh, William S.....1869
Fraser, Alex C.....1878
*Fraser, William.....1836
Fraser, William H.....1867
Fraser, Donald M.....1869
Fraser, Donald.....1868
Fraser, John R.....1878
Freeman, Charles M.....1871
Fuller, W.....1866
Fuller, Horace L.....1870
Fulton, James H.....1863
Garvey, Joseph.....1852
Gardner, Matthew.....1871
Gardner, William.....1867
Gascoyne, George E., Staff Asst. Surgeon.....1861
Gaviller, Edwin A.....1873
Gauvreau, Elzear.....1855
Gauvreau, Lewis H.....1836
Gendron, Thomas.....1866
Gernon, George W.....1872
* Gibb, George D.....1846
Gibson, John B.....1855
Gibson, W. B.....1878
*Gibson, Edward B.....1864
Gilbert, Henry L.....1876
Gillis, John A. F.....1877
Gillies, John.....1867
Gilmour, Angus.....1868
*Giroux, Philippe.....1859
Girdwood, Gilbert P.....1865
Glenn, C. W. E.....1858
Godfrey, Robert.....1845
Godfrey, Abraham D.....1865
*Goodhue, P. J.....1875
Goforth, Franklin.....1863
Gordon, Robert.....1868
Gordon, William Wallace.....1863
Graham, Charles E.....1866
Graham, Henry.....1863
Graham, Kenneth D.....1875
Grant, Donald J.....1863
Grant, James A.....1854
Grant, William.....1867
Gray, John S.....1876
Greaves, Henry C.....1877
Greer, Thomas A.....1876
Grenier, L. P. A.....1863
Guerin, James J. E.....1878
Guest, Thomas A.....1873
Gunn, James.....1861
Gustin, William Claud.....1863
Hagarty, Dan. M. J.....1868
* Hall, Archibald.....[ad eun].....1843
*Hall, James B.....1866
Hall, J. W.....1848
Halliday, James T.....1866
* Hamilton, Andrew W.....1859
Hamilton, Charles S.....1868
Hamilton, John R.....1871
Hamilton, Rufus Edward.....1861
Hamel, Joseph Alexander.....1856
Hammond, James H.....1869
Hanover, William.....1875
Harding, F. W.....1868
Harkin, Henry.....1867
Harkin William.....1858
Harkness, John.....1862
Harkness, Andrew.....1869
Hanington, E. B. C.....1875
Harrison, David Howard.....1864
Hart, Frederick W.....1835
Harvey, Wm. A.....1874
Hays, James.....1866
Hebert, P. Zotique.....1872
† Henderson, Alexander A.....1870
* Henderson, Peter.....1843
* Henry, Walter.....(Hon).....1853
* Henry, Walter J.....1856
Hervey, Jones J. G.....1856
Hethrington, Harry.....1872
Hickey, Charles E.....1866
Hickey, Samuel A., B.A.....1874
Hils, Joseph.....1873
Hingston, W. H.....1851
Hockridge, Thos. G.....1874
* Holden, Rufus.....1844
Holwell, John.....1868
* Holmes, Andrew F.....(ad eun).....1843
Howard, James.....1867
Howard, Robert.....1872
Howard, R. Palmer.....1848
Howden, Robert.....1857
Howey, W. H.....1878
Howitt, William H.....1870
Howland, Francis D.....1867
Hulbert, Edward Augustus.....1860
Hubert, George W.....1859
Hume, William L.....1875
Hunt Henry.....1876
Hunt, J H., L. R. C. S. I.....1869
Hunt, Lewis G.....1871
† Hurd, Edward P.....1865
Hurlburt, Richard F.....1873
Hutchinson, John A.....1878
Irvine, James C.....1866
Ives, Eli.....1863
* Jackson, A. Thomas, Staff Surgeon in the Army.....1846
Jackson, Wm. Fred.....1874
Jamieson, Alexander B.A.....1877
Jamieson, Thomas A.....1875
Johnson, James B.....1876
Johnston, J. C. Asst. Surg. R. A.....1867
Johnston, Thomas G.....1871
Jones, Charles R.....1874
Jones, George N.....1874
* Jones, Thomas W.....(ad eun).....1854
* Jones, Jonathan C.....1865
Jones, Wm. Justus.....1856
Jones, H. J. Montgomery.....1873
Kearney, Wm. J.....1875
Keefer, William N., B.A.....1869

* Keeler, Thomas 1859
† Kelly, Clinton Wayne 1867
* Kelly, Wm. Surg'n. Royl. Artl... 1846
† Kelly, Thomas 1878
Kemp, William 1864
Kennedy, Richard A 1864
* Kerr, James 1858
Killery, St. John, Staff Assistant Surgeon 1862
King, Wm. M. H 1859
King, Reginald A. D 1868
King, Richard A 1867
* Kirkpatrick, A 1856
Kittson, John G 1869
Kittson, Edmund G 1873
Knowles, James A 1866
Kollmyer, Alex. H 1856
Laberge, Ed 1856
Lane, John A 1877
Lang, Christopher M 1876
* Lang, Thos. D 1869
Langlois, O. X 1875
Langrell, Richard T 1865
Larocque, A. B 1847
Law, D. W. C 1868
Law, William K 1877
Lawrence, Henry G. H., Asst. Surgeon Grenadier Guards 1862
Leavitt, Julius 1866
Leclair, George 1851
Leclair, Napoleon 1861
Lee, James C 1856
* Lee, John Rolph 1848
Legault, Daniel 1868
Lemoine, Charles 1850
Lepailleur, Leonard 1848
Leprohon, John L 1843
Levi, Reuben 1876
Lindsay, Heriot 1861
Lister, James 1862
Locke, C. F. A 1872
Logan, David D 1842
Logie, William 1833
* Long, Alexander 1844
Longley, Edmund 1866
Longpre, Pierre F 1848
Loupret, Andre 1850
Loux, William 1870
Loverin, Nelson 1855
Lovett, William 1870
* Lucus, T. D'Arcy 1869
Lundy, Edward Lewis, Staff Asst., Surgeon 1862
Lyon, Arthur 1861
McArthur, Robert R 1867
McBain, John 1854
McCallum, Duncan C 1870
McCann, J. J. B.A 1878
McCarthy, William 1867
McConkey, T. C 1872
McConnell, John B 1873
* McCord, John D 1864
McCormick, Andrew G 1874
McCrimmon, Donald A 1869
McCrimmon, John 1878
McCrimmon, Milton 1878
* McCulloch, Michel ..... (Hon) 1843
McCurdy, John 1866
McDermid, Wm 1875
* MacDiarmid, John Duncan, Staff Surgeon in the Army 1847
McDiarmid, Donald 1867
McDiarmid, James 1873
MacDonald, Angus 1863
* MacDonald, Colin 1853
MacDonald, Roderick 1834
MacDonald, Roderick A 1874
McDonald, Jos. D. A 1873
McDonell, Alex. R 1874
McDonell, Angus 1852
McDonell, Æneas 1849
MacDonnell, Richard L. B.A 1876
McDougall, Peter A 1847
McDougall, Peter A 1864
McEwen, Findlay 1870
MacFarlane, William 1869
Macfie, James 1869
McIlmoyl, Henry A 1876
MacIntosh, Robert 1863
Mack, Francis Lewis 1862
* Mackie, J. R 1865
* Macklem, Samuel S 1859
* Macnabb, Francis A. L 1870
McRae, George 1876
Madrill, John 1867
Major, George W., B.A 1871
Malcolm, John Rolph 1861
* Malhoit, Alfred 1846
Malloch, Edward C 1863
Malloch, William B 1867
Mallory, Albert E 1872
Marceau, Louis T 1872
Markell, Richard 1867
* Marr, Israel P 1849
Marr, Walker H 1859
Marston, Alonzo W 1871
Marston, John J 1863
Mason, James Lindsey, M.A 1863
Mattice, Rich. J 1875
† Matheson, John H 1871
Matheson, Niel 1870
Mayrand, William 1847
McGarry, James 1858
McGeachy, William 1867
McGill, William 1848
McGillivray, Donald 1861
McGowan, Henry W 1867
McGrath, Thomas 1849
McGregor, Duncan 1861
McGuire, Bernard D 1873
McInnes, Walter J 1865
McIntosh, James 1859
McIntosh, Donald J 1870
McIntyre, Peter A 1867
McKelcan, George Lloyd 1860
McKay, John 1896

McKay, Walter.....1854
McKinley, John K.....1878
McLaren, Peter.....1861
McLaren, Peter.....1869
McLaren, Peter.....1872
McLean, Alexander.....1860
McLean, Archibald.....1867
McLeod, James.....1873
McMicking, George.....1851
McMillan, Æneas J.....1874
McMillan, Louis J. A.....1860
McMillan, John.....1857
McMurray, Samuel.....1841
* McNaughton, E. P.....1849
McNeece, James.....1866
McNeill, Ernest.....1878
McQuillen, James.....1874
McTaggert, Alexander.....1869
McVean, John M.....1865
Meane, John, M. R. C. S. L. Staff Surgeon Major.....1869
Meek, James A.....1875
Meigs, Malcolm R.....1865
* Meredith, Thomas L. B.....1842
Metcalfe, Henry I.....1876
Mignault, Henri Adolphe.....1869
Miller, Robert.....1870
Mills, Thos. W., M.A.....1878
Miner, Frank L.....1877
Mines, William W.....1874
Mitchell, Fred. H.....1871
Moffatt, John Edward, Staff Surg..1862
Moffatt, Walter.....1868
Molson, William A.....1874
Mongenais, Napoleon.....1865
Mount, John W.....1855
Monk, Geo. H.....1875
Monro, James T.....1872
Monro, Alexander.....1876
Moore Chas. S.....1874
Moore, Jehiel T.....1874
Moore, Joseph.....1852
Moore, Richard.....1853
Moore, Robert C.....1869
* Morin, Josh.....[Hon].....1850
* Morrison, David R.....1869
Morrison, John, M.A.....1872
Murray, Charles H., B A.....1876
Neilson, W. J.....1878
Nelles, Jas. M.....1875
* Nelson, Horace.....1861
* Nelson, Wolfred.....[Hon].....1848
Nelson, Wolfred D. E.....1872
Nicol, William R.....1872
Nicoll, Charles Richard, Surgeon Major, Grenadier Guards....1862
Nesbitt, James A.....1868
Norton, Thomas.....1874
Oakley, William D.....1877
O'Brien, Thomas B. P.....1862
O'Brien, Robert S.....1873
O'Brien, David.....1873
O'Callaghan, Cornelius H.....1854
* O'Carr, Peter.....1857
* O'Conner, Daniel A.....1861
O'Dea, James Joseph.....1859
Odell, William, Surgeon 19th Regiment of the Line.....1849
O'Leary, James.....1866
O'Leary, Patrick.....1859
Oliver, James W.....1867
O'Reilly, Charles.....1867
Osler, Wm.....1872
*Padfield, Charles W.....1868
Painchaud, Edward S. L.....1848
Palmer, Lorn L.....1867
Paquin, Jean M.....1843
Paradis, Henry.....1848
Paradis, Pierre E.....1867
Park, George A.....1877
Parker, Rufus S.....1866
Parker, Charles S.....1866
* Paterson, James.....1865
Paterson, James.....1864
* Pattee, George.....1858
Pattee, Richard P.....1874
Patten, Montrose A.....1864
* Patton, Edward K.....1867
Pegg, Austin J.....1872
Pegg, Charles H.....1867
Perrault, Victor.....1852
Perrier, John.....1868
Perrigo, James M. A.....1870
Perry, Hezekiah, R.....1873
Phelan, Cornelius J. R.....1865
Phelan, James S.....1874
* Phelan, Joseph P.....1854
Philip, David L.....1861
* Picault, A. C. E.....1857
Pickup, John Walworth.....1860
* Pinet, Alexis.....1847
Pinet, Alex. R.....1864
Poussette, Arthur Courthope.....1860
Powell, Israel Wood.....1860
Powell, Newton W.....1853
Powell, Robert H. W.....1876
Powers, George W.....1861
Powers, Lafontaine B.....1864
Pringle, George.....1855
Prosser, Wm. O.....1874
Proudfoot, John S.....1868
Proudfoot, Alex.....1869
Proulx, Philias.....1844
Prevost, E. Gilbert.....1859
Quarry, James J.....1868
Quesnel, Jules M.....1849
Rea, John Hamilton,.....(Hon)...1853
Rainville, Pierre.....1863
Rambaut, John Surgeon, Canadian Rifles.....1859
Rattray, Charles J.....1871
Rattray, James C.....1174
Raymond, Oliver.....1850
Read Herbert H.....1861
Redner, Horace P.....1864
Reddick, Robert.....1874

Reddy, Herbert L., B. A.....1876
Reddy, John.....(ad eun).....1856
Read, Thomas D.....1871
Reid, Alex. Peter.....1858
Reid, John A.....1871
Reid, Kenneth.....1864
Reynolds, Robert T.....1836
* Reynolds, Thomas.....1842
Richard, Marcel.....1864
Richmond, Peter E.....1873
Ridley, Henry Thomas.....1852
* Riel, Etienne R. R.....1857
Rinfret, Ferdinand R.....1868
* Rintoul, David M.....1854
Richardson, John R.....1865
Ritchie, Arthur F., B. A.....1876
Ritchie, John L.....1874
* Roberts, Edward T.....1859
Roberts, John E., B. A.....1867
Robertson, James.....1865
Robertson, David.....1864
Robertson, David T.....1857
Robertson, Patrick.....1867
Robillard, Adolphe.....1860
Robinson, Stephen J.....1876
Robinson, Wesley.....1872
Robitaille, Louis.....1860
Robitaille, L. T.....1858
† Roddick, Thomas G.....1868
Rodger, Thomas A.....1869
Rogers, Amos.....1874
Rooney, Robert F.....1870
† Ross, George M. A.....1866
Ross, Thomas.....1863
Ross, Henry.....1872
Ross, William G.....1871
Ross, Wm. D.....1875
Rugg, Henry C.....1865
Rumsey, William.....1859
Ruttan, Allen.....1852
* Sabourin, Moise.....1849
Sampson, Jas. (Hon).....1847
Sanderson, George W.....1850
Savage, Thomas Y.....1854
Savage, Alex. C.....1863
Sawyer, James E.....1866
Schmidt, Samuel B.....1847
Schofield, David T.....1854
Scott, Stephen A.....1864
Scott, Wm. E.....1844
Scott, Wm. F.....1875
* Scriven, George Augustus.....1846
Seager, Francis R.....1870
Secord, Levi.....1876
Setree, Edward W.....1878
Seguin, Andre.....1848
Senkler, A. E.....1863
* Sewell, Stephen C.....(ad eun)..1843
Sewell, Colin.....(ad eun).....1869
Sharpe, Wm. James.....1872
Shaver, Peter Rolph.....1854
Shaver, R. N.....1857
Shepherd, Francis J.....1873
Shoebottom, Henry.....1857
* Simard, Amable.....1852
Simpson, Thomas.....1854
Sinclair, Coll.....1874
Smallwood, John R.....1868
Smellie, Thomas S. J., M. A.....1877
Smith, Daniel D.....1868
Smith, Daniel F.....1878
* Smith, Edward W.....1859
Smith, Norman A.....1870
Smith, William.....1876
Smythe, T. W.....1848
Snider, Frederick S.....1876
Sparham, Terence.....1841
Speer, Andrew M.....1874
* Squire, William Wood, M. A.....1864
Stafford, Fred. I.....1878
Stanton, George.....1868
Stark, George A.....1872
* Staunton, Andrew Aylmer, Surgeon Royal Artillery.....1845
Stevens, Alex. D.....1857
Stevenson, Charles N.....1876
Stevenson, James McGregor.....1856
Stevenson, John A.....1873
* Stevenson, John L.....1855
Stevenson, Robert A.....1871
Stewart, Alexander.....1872
Stewart, John Alexander.....1862
Stewart, James.....1869
Stephenson, James.....1859
Stimpson, Alfred O.....1868
Shirk, George.....1865
St. John, Leonard.....1874
Storrs, Arthur.....1876
Stowbridge, James Gordon.....1862
Stroud, Charles S.....1876
Sutherland, Fred. Dunbar.....1861
Sutherland, Walter.....1874
* Sutherland, William.....1836
* Sutherland, William.....1870
Switzer, John E. K.....1865
Tabb, Silas E., M.A.....1869
Tait, Henry Thomas.....1860
Taylor, Wm. H.....1860
Taylor, Sullivan A.....1870
Tew, Herbert S.....1864
Temple, James A.....1865
Thayer, Linus O.....1859
Theriault, F. D.....1863
Therien, Honore.....1863
* Thomson, James.....1842
Thompson, Robert.....1852
Tracy, Andrew W.....1873
Trenholme, Edward Henry.....1862
Trudel, Eugene.....1844
Turgeon, Louis G.....1860
Tuzo, Henry A.....1853
† Tunstall, Simon J., B.A.....1875
Ussher, Henry.....1861
Vannorman, Jonathan A.....1870

Varcoe, Henry L 1865
Vicat, John R.....1867
† Vineberg, Hiram N.....1878
Wagner, A. Dixon.....1872
* Wagner, William H.....1844
Wakeham, William.....1866
Wales, Benjamin N.....1874
* Walker, Robert.....1851
Wallace, Isaac N.....1874
Walsh, Edmond C.....1866
Walton, George O.....1873
Wanless, John R. 1867
Ward, William T.....1873
Ward, Michael O'B.....1875
Warren, Frank.....1872
* Warren, Henry.....1860
Waugh, William.....1872
Webb, James T. S.....1871
Webster, Arthur D.....1878
Weilbrenner, Remi Claude.....1851
Weir, Richard.....1852
* Wherry, John..... 1862
Whitecomb, Josiah G.....1848
Whiteford, James W..... 1873
Whiteford, Richard.....1857
Whitwell, William P. O.....1860
Whyte, Joseph A.....1870
Wigle, Hiram.....1875
* Widmer, Christopher...(Hon)...1847
Wilcox, Marshall B.....1868
Wilson, Benjamin S.....1856
Wilson, Robert M.....1850
Wilson, William.....1857
* Wilscam, John Wilbrod.....1846
Wolverton, Algeron, B. A.....1867
Woods, David, Staff Surgeon.....1860
Wood, George C.....1846
Wood, George.....1863
Wood, Hannibal W.....1865
Woods, Jno. J. E.....1875
Woodfull, Sam. Pratt. Asst. Surgeon Royal Artillery.....1864
Woolway, C. J.....1876
Workman, Benjamin.....1853
Workman, Joseph.....1835
Worthington, Edward...[ad eun]..1868
Wright, John W., B.A.....1878
Wright, Henry P.....1872
Wright, Stephen.....1859
Wright, William.....1848
Wye, John A.....1868
Young, Philip R.....1876
Young, Robert C.....1873
Youker, William.....1870

* Deceased

† Holmes Medallist.

MASTERS OF ARTS.

Allworth, Rev. John, B. A.....1875
Archibald, John S. B. A.....1877
* Bancroft, Rev. Charles (ad eun) 1855
Bancroft, Rev. C., Junior, B. A.....1870
Baynes, Donald, B. A.....1867
Bethune, Meredith Blenkarne, B. A1869
* Bothwell, John A., B.A.....1868
Bowman, Wm. M.....[Hon].....1859
Boyd, John, B. A.....1864
Browne, Dunbar, B. A., B. C. L....1861
Butler, Rev. John.....(Hon).....1852
Cameron, James, B. A.....1874
Carmichael, Rev. J., B. A.....1871
Chamberlin, Browne, D. C. L. (ad eun).....1857
Chapman, Rev. Charles, M. A., London Univ., (ad eun).....1872
Clarke, Wallace, B. A., M. D.....1872
Clowe, John D., B. A.....1874
Cornish, Rev. George, B. A.....1860
Crothers, Rev. William J., B. A...1875
Cushing, Lemuel, B. A., B. C. L...1867
Dart, William J., B. A.....1874
Davidson, Rev. James, B. A.....1836
Davidson, Charles P., B. A.,B.C.L.1867
Davidson, Leonidas H., B. A.....1837
Dey, William J., B. A.....1875
DeWitt, Caleb S., B. A.....1864
Dougall, John R., B. A.....1867
Duff, Archibald, B. A.....1867
Duncan, Alexander, B. A.....1875
Ells, Robert, B. A.....1875
* Gibb, George D., M. D...(Hon)..1856
Gibson, Thomas A.....(Hon)..1856
Gilman, Francis E., B. A.....1865
Gould, Edwin, B. A.....1860
Graham, John H.....(Hon).....1859
Green, Joseph, B. A.....1864
Hall, Rev. Wm., B. A.....1867
Hart, Lewis A., B. A.....1869
Hicks, Francis W., B. A 1870
Hindley, John, B. A 1873
Howe, Henry Aspinwall...(Hon)...1855
Jones, Montgomery, B. A.....1873
Kahler, Frederick A., B. A 1872
Kemp, Rev. Alexander F...(Hon)..1863
Kennedy, George T., B. A.....1872
Kennedy, Rev. John, B. A.....1860
Kirby, James, B. A., B. C. L..... ..1862
Krans, Rev. Edward H., B. A.....1875
Laing, Rev. Robert, B. A.....1877
* Leach, Robert A., B. A., B.C.L..1860

McCord, David R., B. A., B. C. L..1867
McGregor, Duncan, B. A.....1874
McGregor, James, B. A.....1868
* McIntosh, John, B. A.....1873
McLaren, John R., B. A.....1868
McLennan, Duncan H., B. A.....1875
Markgraf, Charles, F. A...(Hon)...1865
Mason, James L., B. A..... 1863
Mattice, Corydon J., B. A.....1862
Morris, Alex., B. A., B. C. L.....1852
Morrison, Rev. James D., B. A.....1868
Morrison, John, B. A.....1870
Munroe, Gustavus, B. A.....1874
* Perkins, John A., B. A.....1862
Perrigo, James, B. A.....1869
* Plimsoll, Reginald J., B. A.....1862
Ramsay, Robt. A., B. A., B. C. L..1867
Robins, Sampson Paul, B. A.....1868
* Rodger, David.....(Hon).....1857
Ross, George, B. A., M. D.....1866
* Stewart, Rev. Colin Campbell, B.A.1870
Tabb, Silas Everett, B. A.....1869
Thorburn, John.....(Hon).....1861
Trenholme, Norman W., B.A., B.C.L1867
Torrance, Edward F., B. A.....1874
Wallace, Rev. R. W., B. A.....1875
Wicksteed, Richd. G., B.A., B.C.L...1866
* Wilkie, Daniel.....(Hon).....1866
Wilson, John, B. A.....1870
Wotherspoon, Ivan Tolkien, B.A..1869

* Deceased.

MASTER OF ENGINEERING.

McLeod, Clement H., Ba. App. Sci.....1878

BACHELORS OF CIVIL LAW.

* Abbott, Christopher C..... 1850
Abbott, Harry..... 1878
Abbott, John J. C..... 1854
Abbott, John B..... 1874
Adam, Joseph..... 1878
Adams, Abel..... 1867
Allan, Irvine..... 1862
‡ Archibald, John Sprott, B. A.... 1870
Archambault, Henri..... 1874
Archambault, Joseph L. C..... 1871
Armstrong, Louis..... 1861
Ascher, Isidore G..... 1863
Aylen, John, M.D..... 1861
Aylen, Peter, B. A..... 1854
* Badgley, Frank H..... 1852
Bagg, Robert Stanley..... 1871
Barnston, John G..... 1856
Barry, Denis..... 1872
Baynes, Edward Alfred..... 1867
Baynes, O'Hara..... 1874
Beaudin, Simeon..... 1878
Beauchamp, Jos..... 1878
Bergeron, Horace..... 1877
Benjamin, Lewis N..... 1865
Beaulieu, Napoleon H..... 1877
Berthelot, Louis..... 1878
‡ Bethune, Meredith B., M.A..... 1869
Bissaillon, Francois Joseph..... 1876
Bissonette, Louis A..... 1878
Branchaud, Athanase..... 1862
* ‡ Bothwell, John A., B.A..... 1866
Bouthillier, Charles F..... 1867
Boyd, John, B. A..... 1864
Bowie, Duncan E..... 1873
Brooke, C. J..... 1878
Browne, Dunbar, M.A..... 1858
Bullock, Wm. E., B. A..... 1863
Butler, Thomas L..... 1865
Calder, John..... 1871
Capsey, George..... 1877
Carden, Henry..... 1860
Caron, Adolphe P..... 1865
Carter, Christopher B..... 1866
Carter, Edward..... 1864
Chamberlin, Brown..... 1850
Chamberlain, John, Junr..... 1867
Chambers, A. Busteed..... 1875
Charland, Alfred..... 1863
Charrette, Pierre P..... 1877
Chauveau, Alexandre..... 1867
Chauret, Amedee..... 1873
Choquette, Francis X..... 1874
Cocquet, Ambroise..... 1865
Couillard, Edouard..... 1875
Coutlee, Lewis W. P..... 1873
Conroy, Robert Hughes..... 1869
Cowan, Robert C..... 1862
* Crimmen, O. J..... 1878
Cross, A. B..... 1878
Crothers, Robert A., B.A..... 1878
Cruickshank, William G..... 1872
Curran, Joseph C..... 1862
Cushing, Charles..... 1869
Cushing, Lemuel, Junr., M.A..... 1865
Daly, J. G..... 1858
Dansereau, Arthur..... 1865
Dansereau, Clement..... 1877
Darby, Daniel..... 1870
Darey, Pierre J., M.A..... 1868
David, Alphonse..... 1872
Davidson, Charles P., M.A..... 1863
Davidson, Leonidas Heber, M.A... 1863
Day, Edmund T..... 1864
Desaulniers, Henri Lesieur..... 1864
Desaulniers, Dionis..... 1870
Desmarais, Odilon..... 1870

Des Rivieres, Rodolphe..... 1875
Des Rosieres, Joseph..... 1873
Desrochers, Jean L. B..... 1863
Doak, George O..... 1868
Doherty, Thos. J..... 1861
‡ Doherty, Charles J..... 1876
Dorion, Adelard A..... 1862
Dorion, Louis C. W..... 1876
Doutre, Pierre..... 1858
Doutre, Gonzalve..... 1861
Driscoll, Netterville H..... 1861
* Drummond, William D..... 1867
Dubuc, Joseph..... 1869
Duchesnay, Henri J. T..... 1866
Duffy, Henry T., B.A..... 1878
Dunlop, John..... 1860
Duprat, Pierre N..... 1866
Durand, Naphtalie..... 1864
Ethier, Marc..... 1877
Faribault, Joseph E..... 1878
Farmer, Wm. O..... 1866
Fay, John E..... 1878
Fisher, Roswell C..... 1869
Fisk, John J..... 1868
Foran, Thomas P..... 1870
Forget, Adelard..... 1877
Franks, Albert W..... 1871
* Gardiner, William F..... 1856
Galarneau, Joseph Antoine..... 1864
Galbraith, William..... 1875
Garon, Alphonse P..... 1877
Gaudet, Oscar..... 1878
Gauthier, Zephirin..... 1859
Gelinas, A..... 1876
Glass, James M..... 1876
Geoffrion, Christopher A..... 1866
Gibb, James R..... 1868
Gilman, Francis E., M.A..... 1865
Girouard, Désiré..... 1860
‡ Gordon, Asa..... 1867
Gosselin, Jean..... 1877
‡ Goodhue, Henry S. W..... 1877
Grahame, Dugald..... 1878
‡ Greenshields, James N..... 1876
Grenier, Amedé L. W..... 1863
Hackett, Michael F..... 1874
Hall, John S., B.A..... 1875
Hall, William A..... 1863
Harnet, Wm. de Courcy..... 1870
Hart, Lewis, A., M.A..... 1869
Hemming, Edward J..... 1855
‡ Hodge, David W. R., B.A..... 1874
Holton, Edward..... 1865
Houghton, John G. K..... 1863
Howard, Rice M..... 1869
Howliston, Alexander..... 1865
Huntingdon, Russ Wood..... 1875
‡ Hutchinson, Matthew..... 1873
Jenkins, George E..... 1874
Jodoin, Isaie..... 1858
Johnston, Edwin R..... 1866
Jones, Richard A. A..... 1854
Joseph, Joseph O..... 1864
Kavanagh, H. J..... 1878
Keller Francis J..... 1869
* Kelley, John P..... 1862
Kemp, Edson, B. A..... 1860
Kenny, Wm. R..... 1865
Kirby, James, M.A..... 1862
Kitson, George R. W..... 1867
Knapp, Frederick A..... 1877
Labadie, M. T. Adolphe..... 1874
Labadie, Y Odillon..... 1874
Lacoste, Arthur..... 1869
Laflamme, R. G..... 1856
Laflamme, Leopold..... 1869
* Lafrenaye, P. R..... 1856
Lambe, William B..... 1850
Lanctot, Husmer..... 1878
Lanctot, Mederic..... 1860
Lariviere, Joseph..... 1874
Lasalle, Lucien..... 1877
Larose, Telesphore..... 1860
Laurier Wilfred..... 1864
Laviolette, Pierre B..... 1878
Lay, Warren Amos..... 1867
Lawlor, Richard S..... 1865
Leach, David S..... 1861
* Leach, Robert A., M.A..... 1860
Le Bœuf, Louis C..... 1873
Lefebvre, Frederick..... 1863
Lebourveau, Steadman A..... 1870
Lonergan, James..... 1873
Lonergan, Michael L. S..... 1871
Loranger, Louis George..... 1869
Levy, J. C. A..... 1878
Lyman, Elisha Stiles..... 1865
Lyman, Frederick S., B.A..... 1869
‡ Lynch, Wm. W..... 1868
MacKenzie, Frederick..... 1861
‡ Major, David..... 1875
Major, Edward James..... 1871
‡ Marler, Wm. DeM., B.A..... 1872
McCord, David Ross, M.A..... 1867
McDougall, John W. C..... 1877
McCormick, Duncan..... 1872
McDonald, Frank H..... 1873
McDonald, John S..... 1876
McCorkill, John C. J. S..... 1877
* McGee, Thos. d'Arcy..... 1861
McGoun, Archibald, B.A..... 1878
McIntosh, John, B.A..... 1868
McKinnon, Edmund..... 1878
McLaren, John J..... 1868
McLaren, John Robert, M.A..... 1860
McLaurin, John Rice..... 1867
‡ McMaster, Donald..... 1871
Merry, John Wesley..... 1870
Messier, Damase..... 1875
Messier, Joseph S..... 1863
Migneault, Pierre B..... 1878
Mitchell, Albert Edward..... 1867

Molson, Alexander..... 1851
Monk, Ed. Cornwallis..... 1870
Monk, Frederick..... 1877
Morrin, Pierre A..... 1878
Morris, Alexander, M.A..... 1850
Morris, John L..... 1860
Morrin, Adelard..... 1878
* Nagle, Sarsfield B..... 1862
Nichols, Thomas, M.D., LL.B..... 1875
Nutting, Charles A..... 1872
Ouimet, Adolphe P..... 1861
Palliser, Joseph..... 1877
Panet Edouard A..... 1874
Papineau, Joseph G..... 1869
Parisault, Chs. Ambroise..... 1859
Pelletier, Louis C..... 1877
Perras, F. X..... 1878
Piché, Aristide..... 1868
Perry, Joseph..... 1869
* Perkins, John A., M.A..... 1860
Perodeault, Narcisse..... 1876
* Plimsoll, Reignald J., M.A 1861
Poutre, Felix E..... 1874
Power, Alexander W. A..... 1868
Prefontaine, Raymond..... 1873
Purcell, John D..... 1877
Rainville, Henri Benjamin..... 1873
Ramsay, Robert A., M.A..... 1866
Richard, Damase F. S..... 1859
Richard, Emery Edward..... 1867
Richard, Edward E..... 1868
Rixford, Emmet Hawkins..... 1865
Robillard, Emilie..... 1874
Robidoux, Emery..... 1866
Rochon, Charles A..... 1861
Rose, William..... 1866

Sabourin, Ernest..... 1863
Santoire, Camille..... 1873
Sarrasin, Ferdinand Leon..... 1871
Scallon, William 1876
Sexton, James Ponsonby..... 1860
Short, Robert..... 1867
Sicotte, Victor B..... 1862
Snowdon, H. L..... 1856
Spong, John R..... 1874
Stephens, Charles Henry..... 1875
Stephens, George W..... 1868
Stephens, Romeo H.. 1850
Stephens, Chas. O..... 1864
Tache, Paschal..... 1876
Tait, Melbourne..... 1862
Taschereau, Arthur..... 1864
Taylor, A. Dunbar, B.A..... 1878
Taylor, Reid..... 1869
Terrill, Joseph Lee..... 1865
Torrance, Fred W., M.A..... 1865
Trenholme, Edward H., M.D..... 1865
‡ Trenholme, Norman W., M.A... 1865
Vandall, Phillipe..... 1865
Vilbon, Chas. A..... 1863
Walker, William S..... 1874
Walsh, Thomas Joseph..... 1863
Watts, William J., B.A..... 1869
* Welsh, Alfred..... 1864
Wicksteed, Richard G., M.A..... 1864
Wight, James H..... 1868
Wood, Franc Ogilvie..... 1870
Wotherspoon, Ivan T. (Laval) [ad-eun] 1869
Wright, William Mackay, B.A..... 1863
Wurtele, Charles J. C..... 1863
Wurtele, Jonathan S. C..... 1870

* Deceased.

‡ Elizabeth Torrance Melallist.

BACHELORS OF ARTS.

Allan, James G. († **E**)..... 1873
Allan, John (**N**)..... 1874
Allworth, John..... 1872
Amaron, Calvin E. (**P 2**)..... 1877
Anderson, Jacob de Witt, († **C**)..... 1866
Anderson, James A..... 1877
Archibald, John Sproot, († **P**)..... 1867
Atwater, Albert W. 1877
Aylen, Peter..... 1850
Bancroft, Rev. Chas., Junior..... 1866
Barnston, Alexander, (†)..... 1857
Baynes, Donald..... 1864
Beckett, William Henry..... 1866
Bethune, Meredith Blenkarne († **N**)..... 1866
Black, James R..... 1874
Blackader, Alex. D., (**N**)..... 1870
Blakely, Malcolm D..... 1878
Bland, Salem G., (Morrin)..... 1877
Bockus, Charles E..... 1852
* Bothwell, John A., († **N**)..... 1864

Boyd, John, (**N 2**)..... 1861
Brewster, William, († **C**)..... 1865
Brooks, Charles H., († **N**)..... 1868
Browne, Arthur Adderley, († **E**)... 1866
Browne, Dunbar..... 1856
Browne, Thomas..... 1853
Bullock, William E., († **C**)..... 1860
Cameron, James, († **M**)..... 1871
Carmichael, James 1867
Cassels, Hamilton, (Morrin)..... 1873
Cassels, Robert, (Morrin) (**P**)..... 1866
Chandler, George H., († **M**)..... 1875
Chipman, Clarence.. 1866
Chubb, Sidney C., (**N 2**)..... 1877
Christie, John H..... 1872
Clarke, Wallace, († **E**)..... 1869
* Cline, John D., († **C**).. 1871
Clowe, John D..... 1863
Cook, Archibald H., (Morrin)..... 1869
Cornish, Rev. Geo., B.A., *London Univ.* (ad eun)..... 1856

Cox, Jacob W.....1876
Craig, James.....1874
Crothers, W. J., (P 2).....1872
Crothers, Robt. A., († C).....1876
Coussirat, Rev. Adrian D., (ad eun)1871
Cushing, Lemuel, (C).....1863
Dart, William J.....1868
Davidson, Charles Peers.....1863
Davidson, Rev. Jas. (ad eun).....1863
Davidson, Leonidas Heber.....1863
Dawson, William B., († N).....1874
Dawson, Rankine, (P 2).....1878
Dewey, Finlay McN., (P 2).....1874
Dey, William J., († N).....1871
DeWitt, Caleb S.....1861
Donald, James T., († N).....1878
Dougall, Duncan.....1860
Dougall, John Redpath.....1860
Drummond, Chas. G. B., (N).....1862
Duff, Archibald, († M).....1864
Duffy, Henry T., (E 2).....1876
Duncan, Alexander.....1867
Ells, Robert, († N).....1872
Empson, John.....1874
Ewing, William.....1878
Fairbairn, Thomas, (P 2).....1863
Ferguson, John S.....1861
* Ferrier, Robert W.....1857
Fessenden, Elisha Joseph.....1863
Fleet, Charles J., (E).....1873
Forneret, George A.,.....1877
Fortin, Rev. Octave (ad eun).....1867
Fowler, William, (N).....1865
Fowler, Elbert.....1868
Fraser, John (Morrin).....1869
Gibb, Charles.....1865
Gilman, Francis Edward.....1862
Gore, Frederick.....1861
Gould, Charles H., († C).....1877
Gould, Edwin.....1856
Graham, John, († E).....1876
Graham, John H.....1878
Grandy, John.....1866
Gray, William.....1876
Greenshields, Edward, († P).....1869
Greenshields, Samuel.....1874
Green, Joseph, († C).....1861
Green, Lonsdale.....1864
Guerin, Edmund W. P., († E).....1878
Hall, John S.....1874
Hall, William.....1861
Hart, Lewis A.....1866
Harrington, Bernard J., († N).....1869
Harvey, Alfred.....1874
Harvey, Charles J.....1874
Hicks, Francis W.....1864
Hindley, John.....1868
Hodge, D. W. R., († E).....1872
Holiday, Caleb S.....1870
Jones, Montgomery, (E).....1869
Johnston, James A., († P).....1870
Joseph, Montefiore, (N).....1870
Kahler, Frederick A., († C).....1869
Kelley, Frederick, W., († E).....1871
Kemp, Edson.....1859
Kennedy, George T., (N).....1868
* Kershaw, Philip G.....1867
Kirby, James, (†).....1859
Krans, Edward H., († E).....1865
Lafleur, Eugene, († P).....1877
Laing, Robert, († P).....1868
* Leach, Robert A.....1857
Lewis, Albert R., (E).....1869
Lyman, Clarence A.....1878
Lyman, Henry H., († N).....1876
Lyman, Frederick Stiles.....1863
Major, George W.....1870
Marler, Wm., De M. († M).....1868
Mason, James L.....1859
Matheson, John.....1876
Mattice, Corydon J.....1859
Maxwell, John, (N).....1872
McCord, David Ross.....1863
MacDonnell, Richard L., († C).....1873
MacDuff, Alexander Ramsay.....1866
McFadyen, Allan L.....1878
McFee, Kutusoff N., († P).....1874
McGibbon, Robert D.....1877
McGoun, Archibald, († P).....1876
McGregor, Archibald F.....1877
McGregor, James, (C).....1864
McGregor, Duncan.....1871
McIntosh, John, († E).....1870
McKenzie, John (Morrin).....1867
McKenzie, Robt., (P).....1869
McKibbin, William M.....1875
McKillop, Ronald.....1878
McLaren, David C.....1878
McLaren, John R.....1856
McLaren, Harry, (†).....1858
McLean, Neil W., (Morrin) (P 2)1866
McLean, Breadalbane S.....1869
McLennan, Duncan H.....1871
McLennan, John S., (P).....1874
McLeod, Duncan C., († M).....1873
McLeod, Hugh.....1866
McLeod, Finlay C.....1872
* McOuat, Walter, (N).....1865
Merritt, David Prescott.....1863
Moore, Francis X.....1868
Morris, William.....1859
Morris, Alexander.....1849
Morrison, John.....1866
Morrison, James D., († N).....1865
Morrison, David W., (E).....1870
Muir, John N.....1864
* Muir, Rev. E. P., (ad eun).....1865
Munro, Gustavus.....1871
Munro, Murdoch.....1872
Murray, Charles H., († N).....1873
Naylor, W. H., († P).....1872
Newnham, Jarvois A.....1878

Oliver, Theophilus H.(Mor.) (P 2)1866
Pease, George H., († C).....1864
Pedley, Hugh.....1876
Pedley, Charles S., (P).....1878
Perrigo, James, (N).....1866
* Perkins, John A.....1858
Petit, Rev. Charles B.....1850
Phillips, Charles W 1852
* Plimsoll, Reginald J.. 1858
Ramsay, R. Anstruther, († N).....1862
* Redpath, George D.....1857
Reddy, Herbert L., (E).....1873
Rexford, Elson J.,(P).....1876
Ritchie, Arthur F., (C).....1873
Ritchie, William F., († C).....1875
Robertson, Alex. († N).....1870
Robertson, Robert, (P).....1877
Robins, Sampson Paul, († M).....1863
Ross, George, († C).....1862
Ross, James, († P).....1878
Russell, Henry (Morrin) 1869
Scott, Henry C. (Morrin) (P).....1866
Scott, Matthew H., († N).....1877
Sherrill, Alvan F., († N).....1864
Slack, George.....1868
Stethem, George T.....1852
Stevenson, Samuel C.....1874
Stevenson, Rev. J. F., B.A., *London Univ.* (ad eun).....1876
* Stewart, Colin Campbell, († N)...1867
Stewart, William S., († C).....1878
Stuart, Gustavus G., († P).....1875
Sweeny, James F.....1878
Tabb, Silas Everett, (N).....1866
Taylor, Archibald D., (C).....1874
Taylor, Edward T.....1878
Taylor, Ernest M.....1875
Thomas, Henry W., († E).....1874
Thornton, Rev. R., M.A., (ad eun).1871
Thornton, Hastewell W., (N).....1878
Torrance, Edward F., (P 2).....1871
Torrance, Frederick W.....1878
Torrance, John Fraser 1872
Trenholme, Norman Wm. († P)....1863
Tunstall, Simon J., (E).....1873
Tupper, James S., (N).....1871
Walker, Thomas. 1860
Wallace, Robt. W., (P) 1872
Ward, George B., († C).....1874
Warriner, William H., († E).....1877
Watson, Alindus J.....1876
Watts, Wm. John, (C) 1866
Wellwood, James.....1878
Whillans, Robert.....1872
Wicksteed, Richard G., (C).....1863
Wilson, John, (E).....1866
Wood, Franc O.....1869
Wood, Thomas F.....1869
Wotherspoon, Ivan T.,(Morrin)(P)1866
Wright, William McKay.....1861

BACHELORS OF APPLIED SCIENCE.

In Civil and Mechanical Engineering.

Boswell, St. George J.....1874
Boulden, Charles M.....1878
Brodie, Robert J.....1873
Batcheller, Alvan A.....1875
Chipman, Willis.....1876
Dawson, William B., B. A.....1875
* Frothingham, John J.....1875
Harvey, Charles J., B.A.....1874
Hawley, David F.....1876
Hethrington, Frederick.....1876
Hall, Richard.....1878
Hill, Arthur E.....1875
Jones, Thomas H.....1877
Kennedy, George T., M.A.....1873
McLean, Alexander J.....1874
McLeod, Clement H.....1873
Page, John.....1875
Robertson, George S.....1874
Rogers, Richard B.....1877
Ross, George.....1875
Ross, Philip D 1878
Sproule, William J.....1877
Stewart, Donald A.....1873
Swan, John.....1878
Thompson, William T. (N).....1877
Walbank, William Mc.L.....1877
Wardrop, Norval.....1877
Wicksteed, Henry K.....1873
Wilson, Robert A.....1875

In Mining and Assaying.

Rogers, Richard B.....1878
Spencer, Joseph Wm. [N].....1874
Torrance, John Fraser, B.A. [N] ..1873
Wicksteed, Henry K.....1874
Wilkins, Dan. F.H., B.A. (Tor) [N] 1875

In Practical Chemistry.

Adams, Frank.....1878

GRADUATES IN CIVIL ENGINEERING.

Barnston, Alexander B.A.....1859
Bell, Robert, [N].....1861
Crawford, Robert.....1859
Doupe, Joseph.....1861
Edwards, George.....1863
Frost, George H.....1860
Gaviller, Maurice.....1863
Gooding, Oliver.....1858
Gould, James H.....1862
Kirby, Charles H.....1860
McLennan Christopher.....1859
Reid, John Lestock.....1863
Rixford, Gulian Pickering.....1864
Ross, Arthur.....1860
* Savage, Joseph.....1860
Walker, Thomas, B. A.....1860

[C]	First Rank Honours in Classics :	[C2]	Second Rank do.
[E]	" " " in English Literature, &c.	[E2]	" "
[M]	" " " in Mathematics and Physics.	[M2]	" "
[N]	" " " in Natural Science.	[N2]	" "
[P]	" " " in Mental and Moral Philosophy.	[P2]	" "

† indicates the *Gold Medallist* for the subject denoted by the letter to which it is prefixed ; or, if standing alone, for best general standing. For the titles of the Gold Medals assigned to the several subjects since 1864 see, § VI.

In 1857, 1858, 1859, the *Chapman* Medal was awarded for the best general standing ; 1860, 1861, 1862, for Classics ; 1863 for Mental and Moral Philosophy ; 1864 for Natural Science.

In 1862 the *Prince of Wales* Medal was awarded for Natural Science ; 1863 for Mathematics and Physics ; 1864 for Classics.

LIST OF THE PRINCIPAL DONATIONS

TO THE

LIBRARY AND COLLECTIONS OF THE FACULTY OF ARTS.

FROM MAY, 1877, TO MAY, 1878.

1.—TO THE LIBRARY.

J. F. Torrance, Esq., B. A., ... Ueber Terebrateln und Delthyris Von Leopold von Buch. 4to.

E. Lareau, Esq, B.C.L. ..... Mélanges Historiques et Littéraires. 8vo.

A. R. C Selwyn, Esq., F. R. S., ... Report of Progress of the Geological Survey of Canada for 1875-76. 8vo.

Institution of Civil Engineers, London..... Minutes of Proceedings. Vols XLVIII and XLIX. 8vo.

Clarence King, Esq., United States Geologist.. Report of the Geological Exploration of the 40th Parallel. vol. VI. 4to.

Smithsonian Institution..... Brazilian Biographical Annual. 3 vols. 8vo.

J. Young, Esq., and Dr. Angus Smith..... Graham's Chemical and Physical Researches. 8vo.

Government of the Province of Quebec..... Statutes of the Province of Quebec for 1876. 8vo.

Lords Commissioners of the Admiralty..... Greenwich Observations, Astron, and Magnet, and Meteorological, made in the years 1873 and 1874. 2 vols. 4to.

do do ..... Greenwich Magnetical and Meteorological observations, made in 1873 and 1874. 2 vols. 4to.

do do ..... Greenwich Astronomical Results, 1873 and 1874. 2 vols. 4to.

do do ..... Results of Astronomical Observations made at the Cape of Good Hope, during 1871-72-73, 8vo.

Government of the State of New Hampshire, U.S., Hitchcock's Geology of New Hampshire, Part II. 4to.

Laval University..... Calendar for 1877-78. pam. 8vo.

Government of the Dominion of Canada..... Sessional Papers. Nos 1-9 to vol. X. 9 vols. 8vo.

do do ..... Journals of the House of Commons. vols IX. and XI. 1877. 8vo.

do do ..... Journals of the Senate. vol. XI. 8vo.

do do ..... Geological Survey of Canada. Report for 1875-76. 8vo.

do do ..... Appendix to Journals. vol. XI. 8vo.

do do ..... Statutes of Canada. 1877, English and French. 2 vols. 8vo.

Montreal Board of Trade ..... Home and Foreign Trade of Canada, and Report of the Commerce of Montreal, 1877. 8vo. pam.

Edinburgh University..... Calendar for 1877-78. 12 mo.

R. D. McGibbon, Esq., B. A..... A Synopsis of the Great Pew Case. 8vo.

Principal Dawson, LL.D ..... Origin of the World, according to Revelation and Science. 8vo.

Trustees of the British Museum ..... Catalogues of Zoological Collections in the British Museum. 28 vols.

do do ..... Catalogues of and Guides to various Collections in the British Museum. 2 pam., 4to, and 14 pam., 8vo.

Dr. N. Cressy ..... Gould's Grasses and their Culture. 8vo.

G. T. Kingston, Esq ..... Sixth Annual Report of the Meteorological Office of the Dominion of Canada. 1876. pam. 8vo.

Mrs. P. P. Carpenter ..... 231 Vols, comprising works on theological, classical, scientific and other subjects.

University of Christiana, Norway ..... Thomas Saga Erkibyskups. 8vo. pap.

do do ..... Postola Sogur. 8vo. pap.

do do ..... Lieblein's Acgyptische Denkmaeler. pam. 8vo.

do do ..... Transfusion und Plethora. Von J. W. Múller. pam. 8vo.

do do ..... Caspari's Ungedruckte Quellen zur Geschichte des Taufsymbols. 8vo.

do do ..... Kjerulf om Skuringsmarker, Glacialformationen, &c., &c. 4to. pap.

do do ..... Anden Beretning om Ladegaardsoens Hovedgaard, 8vo. pap.

Government of the Province of Quebec ..... Journals of the Legislative Assembly. Vol. X. 1877. 8vo.

do do ..... Sessional Papers. Nos 1-30 to Vol. X. 1876. English and French. 8vo.

Trustees of the British Museum ..... Catalogues of Birds in the Collection of the British Museum. Vol. III. 8vo.

do do ..... Günther's Gigantic Land-Tortoises. 4to.

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Institution of Civil Engineers ..... Minutes of Proceedings. Vol. L. 8vo.

Dr. F. V. Hayden, United States Geologist ..... Report of the U. S. Geological Survey of the Territories. Vol. XI. 4to.

do do ..... Ninth Annual Report of the U. S. Geological and Geographical Survey of Colorado and Adjacent Territories for 1875. 8vo.

do do ..... Mathews' Ethnography and Philology of the Hidatsa Indians. 8vo.

do do ..... Coues' Fur-Bearing Animals. 8vo.

State Board of Geological Survey of Michigan ..... Geological Survey of Michigan. Lower Peninsula. 1873-1876. vol. III. roy. 8vo.

Joseph Doutre, Esq., Q. C. ..... Two Photographs of the Commissioners and Counsel of the Fishery Commission.

Clarence King, Esq., United States Geologist ..... U. S. Geological Exploration of the Fortieth Parallel. II. Geology.—IV. Ornithology and Palœontology. 2 vols. 4to.

Messrs. Miller & Co, Publishers ..... Smith's Elementary Algebra. 8vo.

James Croil, Esq ..... Presbyterian Record for the Dominion of Canada. January 1876 to December 1877. 8vo.

Toronto University ..... Examination Papers for 1877. 8vo.

W. F. Tolmic, Esq., ... Canadian Pacific Routes. pam. 8vo.

Superintendent of Education Province of Quebec ..... Report on Education, for the year 1876-77. 8vo. pap.

McGill College Book Club ..... 134 Vols, comprising recent publications on literary and scientific subjects.

Geological Survey of Pennsylvania ..... Report of Progress of the Second Geological Survey of Pennsylvania for 1876-1877. 3 vols. 8vo.

Royal Society of London ..... Philosophical Transactions for 1876 & 1877. vol. 166. Part II., and vol. 167, Part I. 2 vols. 4to.

do do ..... Proceedings. Nos. 175-183. From Nov. 16, 1876, to June 21, 1877. 9 pam. 8vo.

do do ..... Catalogue of Scientific Papers. (1865-1873.) 4to.

Lords Commissioners of the Admiralty ..... Greenwich Observations, Astron, and Magn. and Meteorological, made in 1875. 4to.

do do ..... Greenwich Astronomical Results, 1875. 4to.

do do ..... Greenwich Magnetical and Meteorological Results, 1875. 4to.

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do do ..... Results of Astronomical Observations at the Cape of Good Hope, 1874. 8vo.

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American Institute of Mining Engineers, Eaton, Pa., ... Transactions, Vol. V. With Index to vols I-V. 8vo.

Royal Observatory, Edinburgh ..... Astronomical Observations, for 1876-1877. vol. XIV. 4to.

II.—TO THE MUSEUM, & APPARATUS.

From G. Barnston, Esq., Montreal ..... A Collection of British Plants.

" E. B. Chandler, Esq., Dorchester New Brunswick ..... Fossil Fishes from the Beliveau Mine.

" Geological Survey of Canada, per A. R. C. Selwyn, Esq., F.R.S. Director ..... A Collection of Canadian Plants, on Deposit.

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" J. Fraser Torrance, Esq., B.A., Ba. App. Sci., ... Collection of Ores and Crystallized Minerals from Germany.

McGill Normal School.

1878-79.

GOVERNMENT OF THE SCHOOL.

Under the Regulations for the establishment of Normal Schools in the Province of Quebec, the Superintendent of Education is empowered to associate with himself, for the direction of one of these Schools, the Corporation of McGill University, Montreal. In accordance with this arrangement, the Provincial Protestant Normal School is affiliated with the McGill University, and the following members of the Corporation of the University constitute the Committee of the Normal School for the Session of 1878-79.

NORMAL SCHOOL COMMITTEE.

J. W. DAWSON, LL.D., F. R. S., Vice-Chancellor of the University, *Chairman.*

HON. JAMES FERRIER, Senator. } Governors of McGill College,
PETER REDPATH, Esq., } Governors of McGill College,
REV. GEORGE CORNISH, LL. D. } Fellows of McGill University.
ROBERT A. RAMSAY, M.A., B. C. L. } Fellows of McGill University.

WILLIAM CRAIG BAYNES, B. A., *Secretary.*

OFFICERS OF INSTRUCTION.

WILLIAM HENRY HICKS, Esq.—*Principal and Ordinary Professor of English Language and Literature.*

JAMES MCGREGOR, M.A.—*Ordinary Professor of Mathematics, and Instructor in Classics.*

SAMPSON PAUL ROBINS. M. A.—*Associate Professor of Natural History.* (*)

PIERRE J. DAREY, M.A., B. C. L.—*Associate Professor of French.*

MR. HARRINGTON BIRD.—*Instructor in Drawing.*

MR. R. J. FOWLER.— " *in Music.*

MR. JOHN ANDREW.— " *in Elocution.*

J. BAKER EDWARDS, Ph.D.—*Lecturer on Chemistry and Natural Philosophy.* (†.)

FRANCIS W. HICKS, M.A.–Assistant to Professor of English Language and Literature.

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* Prof. Robins will also in the next Session deliver lectures on the Art of Teaching to the Elementary Class.

† Dr. Edwards will also lecture on Agricultural Chemistry.

Announcement for Next Session.

This institution is intended to give a thorough training to teachers, especially for the Protestant population of the Province of Quebec. This end is attained by instruction and training in the Normal School itself, and by practice in the Model Schools ; and the arrangements are of such a character as to afford the greatest possible facilities to Students from all parts of the Province.

The Twenty-second Session of this School will commence on the first of September, 1878, and will terminate on the first of July 1879.

The complete course of Study extends over three years, and the Students are graded as follows.—

1. *Elementary School Class.*—Studying for the Elementary School Diploma.

2. *Model School Class.*—Studying for the Model School Diploma.

3. *Academy Class.*—Studying for the Academy Diploma.

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1. *Conditions of Admission and obtaining Diplomas.*

Candidates for admission into the Elementary School Class will be required to pass an examination in Reading, Writing, the Elements of Grammar, Arithmetic, and Geography ; and to produce the certificate, and sign the application, referred to in Articles 1 and 2 of the Regulations. Admission into each of the higher classes requires a knowledge of the subjects of the previous one.

Each Student must produce a certificate of good moral character from the clergyman or minister of religion under whose charge he has last been, and also testimony that he has attained the age of sixteen years. He will also be required to sign a pledge that he purposes to teach for three years in some Public School in the Province of Quebec.

There will be a Semi-sessional Examination at Christmas, which all Students are required to pass, in order to continue in the classes.

At the close of the first year of Study, students may apply for examination for diplomas giving the right to teach in Elementary Schools ; and after two years' study, or if found qualified at the close of the first year, they will, on examination, be entitled to diplomas as teachers of Model Schools.

Students having passed the examination for the Model School Diploma, with creditable marks in classics and mathematics, or having otherwise advanced to the requisite knowledge, may go on to the Academy Class, and, on examination, may obtain the Academy Diploma.

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2. *Privileges of Students.*

On complying with the above conditions, all students will be recognized as *Teachers-in-Training;* and as such will be entitled to free tuition with the use of text books, and to bursaries in aid of their board, not exceeding $36.00 per annum in the case of those in the two first Classes, or $80.00 in the case of those in the Academy Class, should they be successful in obtaining the diploma at the final examination. A portion of this allowance will be advanced to such students as are not resident in Montreal, on their passing the semi-sessional examination at Christmas.

Under the regulations subjoined, and with the view of extending the benefits of the School to all parts of the country, those who reside at a distance of more than ninety miles from the city of Montreal, will also be entitled to a small allowance for travelling expenses, proportionate to the distance.

Students resident in Montreal may share in the bursary fund, on producing certificates from their ministers or clergymen that such aid is absolutely necessary to their continuing in attendance at the school.

In addition to religious instruction of a general Protestant character by the Professors, arrangements will be made for special religious instruction by ministers representing the several denominations with which the students may be connected.

No boarding-house is attached to the institution, but every care will be taken to insure the comfort and good conduct of the students, in private boarding-houses approved by the Principal. Board can be obtained at from $10 to $14 per month.

The Prince of Wales Medal and Prize will be given to the Student taking the highest place in the Model School Class, provided that such Student shall attain to the standard fixed by the Regulations of the Council of Public Instruction for this Medal.

The J. C. Wilson Prize of $40 and a Book, contributed by him as a former Student of the School, will be offered for competition to the candidates for the Elementary Diploma, and will be given for the highest aggregate number of marks.

All the preceding regulations and privileges apply to female as well as to male students.

Persons holding the degree of B. A. or M. A. of any University in the Province of, Quebec, may receive the Academy Diploma, on passing an examination in the art of teaching, and in such other subjects necessary to the Academy Diploma, as may not have been included in their University Examinations.

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3. *Course of Study.*

1. ELEMENTARY SCHOOL CLASS STUDYING FOR THE ELEMENTARY SCHOOL DIPLOMA.

With the view of accommodating those who may be unable to enter at the commencement of the Session, or whose previous education may enable them to enter at a more advanced period, the course of study in this class is divided into terms, as follows :—

FIRST TERM, from September 1st to December 26th.

(Entrance examination as stated above.)

English.—Grammar and Composition ; so far as to parse syntactically and write correctly a few short descriptive sentences. Text-Books, Bullion's Grammar and Parker's Progressive Lessons ; Reading and Spelling, Etymology, Penmanship, Elocution.

Geography.—So far as to have a good acquaintance with the Map of the world.

History.—Outline of Sacred and Ancient History.—History of Canada. Text-Books, White and Hodgins.

Arithmetic.—Simple and Compound rules. Vulgar Fractions, with explanation and demonstration of rules. Text-Book, Sangster's Arithmetic.

Algebra.—The Elementary rules as in Todhunter's Algebra.

Geometry.—First Book of Euclid.

Art of Teaching.—The Physical, Mental and Moral Constitution of Children.

Physics.—The Chief Forces of Nature, Properties and States of Bodies, Solids, Liquids and Gases.

French.—Elements of Grammar, easy reading and translation. Text-Books, Student's Companion to the study of French. Darey, Lectures francaises.

Natural History.—Botany as in Gray's Text-Book.

Drawing.—Elements and Simple outlines.

Music.—Vocal Music with Part Songs.

SECOND TERM. January 1st to April 1st.

(Pupils entering at the commencement of this term, will be expected to pass a satisfactory examination in the subjects of the previous term.)

English.—Grammar and Composition, so far as to be able to analyse simple and complex sentences, and to write correctly a short essay on a familiar subject.—Elocution continued.

Geography.—So far as a good acquaintance with the physical features and political divisions of the great continents.

History.—England and France. Ancient History.

Arithmetic. Practice, Proportion and Per-centage.

Algebra. Simple Equations.

Geometry, Second Book of Euclid.

Art of Teaching. General Methods of Education.

Physics. Motion. Vibration. Heat and Light.

French. Grammar continued ; including Reading, Translation, Oral and Written Exercises.

Natural History, Continued.

Drawing. Landscape, etc., in Pencil.

Music. Elements of Vocal Music, and Part Songs.

THIRD TERM. April 1st, to July 1st.

(Pupils entering at the commencement of this term, will be expected to pass a satisfactory examination in the subjects of the previous terms.)

English.—Advanced Lessons, Grammar and Composition, Elocution continued.

Geography and History.—Advanced Lessons, with use of Globes and recapitulation of previous parts of the course.

Arithmetic. As applied to Mensuration ; and general recapitulation.

Book-keeping. First principles.

Algebra. Simple Equations of two and three unknown quantities.

Geometry. Recapitulation and Deductions.

Art of Teaching. School arrangements.

Elementary Chemistry. Elements and Constituents of Soils.

French, Natural History, Drawing and Music, Continued as in the previous term,

Religious Instruction will be given throughout the Session.

2. MODEL SCHOOL CLASS, STUDYING FOR THE MODEL SCHOOL DIPLOMA.

[*Students entering this Class, must have passed a satisfactory examination in the subjects of the Elementary School Class. The Class will pursue its studies throughout the Session, without any definite division into terms :*]

English.—Principles of Grammar and Composition, Style. History of the English Language. Lectures on English Literature. Elocution.

Geography.—Mathematical, with Nautical Problems, Detailed course of Political and Physical Geography.

History.—Mediæval and Modern, with special reference to the History of Literature, Science and Art, and Colonization and Commerce.

Education.—Advanced course of Lectures on Educational Subjects.

Mathematics.—Logarithmic, Algebraic and Geometric Arithmetic, Recapitulation of Commercial Arithmetic and Book-keeping. Quadratic Equations. Ratios and Progression. Theorem of Undermined Coefficients, and Binomial Theorem. Third, Fourth and Sixth Books of Euclid. Application to mensuration.

Object Lessons.

Chemistry and Natural Philosophy. — Affinity, Laws of Combination, Principal groups of Salts, Electricity and Electrolysis, Mechanical Physics.

Classics.—Elements of the Latin Language, as in Bryce's 1st Latin Reader.

French.—Student's Companion. Translation from French into English, and from English into French ; Darey, Lectures francaises.

Agricultural Chemistry.—Principles, and application to Canadian Agriculture.

Drawing.—Figures from the Flat and from Models. Elements of Perspective.

Music.—Instrumental Music, Part Songs, and Rudiments of Harmony.

Religious Instruction throughout the Session.

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3. ACADEMY CLASS, STUDYING FOR THE ACADEMY DIPLOMA.

(*Students entering this Class must have passed a creditable examination in the subjects preparatory to the Course of Study.*)

English Literature.—An Advanced course.

History and Geography.

Logic and Ethics.—As in Abercrombie's Intellectual and Moral Philosophy.

Mathematics.—Trigonometry, Solid Geometry and Mechanics, Galbraith and Haughton.

Latin.—Sallust, Catiline ; Virgil, Æneid, Book VI. ; Latin Prose Composition, Roman History.

Greek.—New Testament, John's Gospel ; Xenophon, Anabasis B. I ; Grammar and History.

Botany.—As in Gray's Text-Book.

French.—Conversation in French, French Literature. Poitevin's French Grammar, Racine and Moliere.

Elocution.

Drawing.

Education and object Lessons. In the case of students who have not already attended the lectures in these subjects.

EXTRACTS FROM THE REGULATIONS.

Special Regulations for the admission of teachers in training.

Article First,—Any person desirous of being admitted as a teacher in training must apply to the Principal of the Normal School, who, on his producing an extract from the Register of Baptisms, or other evidence, showing that he is full sixteen years of age, with the certificate of character and conduct required by the 6th article of the General Rules and regulations, approved by his Excellency the Governor-General in Council, on the 22nd December, 1856, shall examine the candidate.

If upon his examination it is found that the candidate can read and write sufficiently well, knows the Rudiments of Grammar in his mother tongue, Arithmetic as far as the rule of three inclusively, and has some knowledge of Geography, the Principal shall grant him a certificate.

Article Second.—The candidate having thus obtained the certificate of the Principal, shall then, (in the presence of two witnesses, who, with the Principal, shall countersign the same,) sign an application in writing for admission, containing the declaration required by the 23rd general regulation. This shall be forwarded to the Superintendent of Education, together with all the certificates and other documents required, and if the whole be found correct, the Superintendent shall cause the name of the candidate to be inscribed in the Register, and notice thereof shall be given to the Principal.

Article Third.—The teachers in training shall state the place of their residence ; and those who cannot reside with their parents, will be permitted to live in boarding-houses, but in such only as shall be specially approved of. No boarding-houses having permission to board male teachers in training will be permitted to receive female teachers in training as boarders, and *vice versa.*

Article Fourth.—Every teacher in training, on passing the examination, will be allowed a sum not exceeding $36 to assist in paying his board. (*)

Article Fifth.—Every teacher in training residing at a distance of more than ninety miles from the City of Montreal, shall be entitled to receive an allowance for travelling expenses proportionate to the distance but not to exceed ten dollars *per annum.*

Article Sixth.—The total amount of allowances paid to teachers in training under the foregoing articles shall not exceed $1333,33 currency, yearly—that being the sum granted for that object ; and when the whole of this amount is

* Except in the case of teachers in training for the Academy Diploma, who may receive a sum not exceeding $80.

appropriated, such teachers in training as may apply for admission shall not be entitled to any portion thereof until vacancies shall occur.

Special Regulations for Government and Discipline.

Article First.—Teachers in training guilty of drunkenness, of frequenting taverns, of entering disorderly houses or gambling houses, or keeping company with disorderly persons, or committing any act of immorality or insubordination, shall be expelled.

Article Second.—There shall be no intercourse between the male and female teachers-in-training while in School, or when going to, or returning from it. Teachers of one sex are strictly prohibited from visiting those of the other.

Article Third.—They are on no account to be absent from their lodgings after half-past nine o'clock in the evening.

Article Fourth.—They will be allowed to attend such lectures and public meetings only as may be considered by the Principal conducive to their moral and mental improvement.

Article Fifth.—Proprietors of boarding-houses authorized by the Principal shall report to him any infraction of the rules with which they may have become acquainted.

Article Sixth,—The Professors shall have the power of excluding from the lectures, for a time, any student who may be inattentive to his studies, or guilty of any minor infraction of the regulations.

Article Seventh.—Teachers in training will be required to state with what religious denomination they are connected ; and a list of the Students connected with each denomination shall be furnished to one of the Ministers of such denomination resident in Montreal, with a request that he will meet weekly with that portion of the teachers in training, or otherwise provide for their religious instruction, Every Thursday after four o'clock will be assigned for this purpose.

Article Eighth,—In addition to punctual attendance at weekly religious instruction, each student will be required to attend public worship at his own church, at least every Sunday,

Intending students may obtain all necessary information on application to the Principal or either of the Professors.

MODEL SCHOOLS OF McGILL NORMAL SCHOOL.

Head Teacher of Boys' School—Francis W. Hicks, M. A.
" " Girls' School—Jane A. Swallow.
" " Primary School—Lucy H. Derick.

These Schools can accommodate about 300 pupils, are supplied with the best furniture and apparatus, and conducted on the most modern methods of teaching. They receive pupils from the age of six and upwards, and give a thorough English Education. Fees ; Boys' and Girls' Model Schools, 25c. to 40c. per week ; Primary School, 15c. ; payable weekly.

School Examinations of the McGill University, 1878-9.

FOR CERTIFICATES OF THE UNIVERSITY AND THE TITLE OF ASSOCIATE IN ARTS.

These Examinations are held in Montreal, commencing May 19th, but local centres may be appointed elsewhere on application to the Principal of the University, accompanied with satisfactory guarantees for the payment of necessary expenses.

The Examinations are open to Boys or Girls, under 18 years of age, from any Canadian School, under the following regulations.

Subjects of Examination.—1879.

1. These are divided into two Classes, (I) *Preliminary*, consisting of those in which every Candidate must pass; and (II) *Optional*, consisting of those in which the Candidate may have a choice.

2. The Preliminary subjects, with their values severally, are :—

English Reading	30 *marks.*
English Dictation	40 do.
English Grammar (as in Morell or Smith)	50 do.
Arithmetic (all the ordinary rules)	90 do.
Geography (acquaintance with the maps of each of the four Continents, and of British North America)	50 do.
British History (as in Collier), and Canadian History (as in Jeffers)	50 do.

The Candidates will also be examined in the Gospels, unless objection be made thereto by their parents or guardians, and creditable answering in the same will be mentioned in the Certificate.

Additional marks, not exceeding 20, may be allowed in the Dictation paper, for quality of handwriting.

No candidate can pass unless he shall have obtained at least *one-third* of the total number of marks in each of the above subjects, except Reading and Dictation, in which *two-thirds* will be required.

3. The Optional subjects are divided into three sections as follows :—

(1) Languages.

Latin.

Grammar. Cæsar, Bellum Britannicum. Cicero, Pro Archia. Virgil, Eclog. I., IV., VI., VII., IX.	150 marks.

Greek.

Grammar. Homer, Iliad, Bk. VI. Xenophon, Anabasis, Bk, II.	150 do.

French.

Grammar.
Extracts from Molière, in Darey's French Reader.
Translation from English into French, (Vicar of Wakefield, chaps. 1 and 2) } 100 marks.

German.

Grammar.
Adler's Reader, Section II.
Translation from German into English. } 100 do.

(2) Mathematics, Natural Philosophy, &c.

Geometry.

Euclid, I. II. III. ..... 150 do.

Algebra.

Elementary rules, Involution. Evolution, Fractions, Simple Equations. } 150 do.

Plane Trigonometry.

Measurement of Angles, Trigonometrical Ratios of a single angle and of two angles, Complemental and Supplemental Angles, and the Solution of Right-angled triangles.

Natural Philosophy.

Mechanics and Hydrostatics. (As in any ordinary School Text-Book.) } 100 do.

Geometrical and Freehand Drawing ..... 100 do.

(3) English.

The English Language:—

Philology (as in Smith's Grammar and Peile's Primer.)
Trench's Study of Words. } 100 do.

English Literature.

English Literature, Primer by S. A. Brooke.
Scott's Lady of the Lake.
Milton's Paradise Lost, Books 1 and 2. } 100 do.

Additional Marks, not exceeding 50, may be allowed in the literature paper for quality of Composition.

History.—(as in Primers of Greece and Rome, and Collier's great events.) ..... 100 do.

Geography.—Physical, Political and Commercial ..... 100 do.

Instead of passing in one or more subjects of the English Section, Candidates may, if they prefer it, pass in one or more of the following subjects:—

(4) Natural Science.

Zoology, (as in Nicholson's Introductory Text-book.) ..... 100 do.
Botany, (as in Gray's First Lesson.) ..... 100 do.
Geology, (as in Dana's Text-Book.) ..... 100 do.
Chemistry, (as in Miller's Introduction to Inorganic Chemistry) 100 do.

Every Candidate must pass in at least one, and not more than three subjects in each of the Optional Sections.

No Candidate will be considered as having passed in any of the above Optional Subjects, unless he has obtained *at least one-fourth* of the total number of Marks obtainable in that subject.

Any Candidate who passes in more than one subject of any section, and who in at least one of those subjects obtains *more than half* the total number of Marks, will be entitled to a Certificate of creditable answering, in that subject.

The total number of Marks gained by every Candidate, including both Preliminary and Optional Subjects, shall be added up, and the Candidates arranged in a printed list, at the close of the Examination, in the order of these totals. No Marks in any subject shall be counted unless the Candidate has gained at least the minimum number of Marks in that subject.

Candidates passing in at least two Languages of Section 1st, one of them being Latin or Greek, shall receive Senior certificates. Candidates passing in any one Language of Section 1st, or in two Modern Languages, shall receive Junior certificates. Candidates who have fulfilled the requirements for the Junior certificate, and have taken at least half the Marks in Arithmetic, Geometry and Algebra, and have passed in Trigonometry and in one Natural Science subject or in two Modern Languages, shall be entitled to Senior certificates.

Boys taking Senior certificates, shall be termed Associates in Arts of the University.

Every Candidate shall present a certificate of character, and also a certificate from his parents or guardian that his age on first day of the examination does not exceed eighteen years.

In the case of those who pass in Latin, Greek, English, Algebra and Geometry, the examination will be received as the Matriculation Examination in the Faculty of Arts.

Candidates who fail, or who may be prevented by illness from completing their examinations, may come up at the next examination without extra fee.

The Examination will be held in the William Molson Hall, on Monday May 19, and successive days, except Saturday, in the following order:

1. *Preliminary Subjects.*—(May 19.) Geography; Gospels; (20,) English, Reading; Dictation; (21,) Arithmetic; British and Canadian History.
2. *Optional Subjects.*—(May 22,) Geometry; French; (23,) Latin; Natural Science; (26,) Greek; German; (27,) English Literature; History; (28,) Algebra; Natural Philosophy; Trigonometry; (29,) English Language; Geography.

Hours of Examination, 9 a.m. and 2 p. m.

The Examination fee ($4) must be paid by candidates, to the Secretary of the University, on entering their names.

Regulations are being prepared for a *Higher Examination for Women.* If approved by the Corporation of the University, they will be announced in a separate circular.

School Certificates of the University.

1. *Examinations for the Diploma of Associate in Arts, and Senior Certificates.*

1865

Montgomery Jones
John Ferguson
Charles Cushing
Robert H. Conroy
Samuel Stevenson
Wallace Clarke
Frederick W. Evans
Robert W. Forester
Edward B. Greenshields
Montgomerie Lewis
George Joseph Bull
Albert Murray
Daniel McLachlin

1866

Sidney Arthur Fisher
Charles E. Proteous
Will. W. Walkem
Chas. G. Stewart
Geoffrey W. Porteous
Florence David
Hew. D. Whitney
George W. Torrance
Robt. M. Esdaile

1867

Charles H. Ferry
James Rodger
Geoffrey W. Porteous
Thomas C. Thomson
Francis J. Shepherd
Gerald Lloyd

1868

John Fraser Torrance
Will. Osborne M. Cross
Henry G. W. Badgley
John B. Abbott
John Gray Grant
Thomas C. Hempsted

1869

Arthur F. Ritchie
Simon J. Tunstall
Charles R. Jones
O'Hara Baynes
Aaron D. M. DeSola
Charles Jas. Fleet
John Thos. Caldwell
James M. Mitchell
John Kay
James Green

1870

William Bell Dawson
Archibald D. Taylor
Hiram B. Stephens
Henry W. Thomas
Samuel Greenshields
Sheringham A. Shepherd
William McEachran
David S. Robertson

1875

William D. Lighthall
W. A. Farwell
Robert T. B. Howard
Charles A. Molson

1876

J. Herbert Darey
Paul Theodore Lafleur
Edwin Hudson Bisset
Andrew G. Ross
James R. Foster
Frederick Mindon Cole
William Dawson McGregor
John Ewart
J. Gordon Gibson
Wilfred T. Skaife
Charles J. Walker

1877

Alexander Falconer
Thomas B. Macaulay
Armand F. Teefy
Mina Douglas
M. Stuart Fraser
William Martin
Walter H. Snow
Louisa M. Fee
Margaret A. Mills
Ida Papineau
Walter E. Lyman
Helen Macklen
Jane Darling
George Graham
Murray A. Biggar
Jessie Ross
Eva Dawson
Alice Cumming
Kenneth R. Macpherson
Walter H. Lancey
Robert A. Wallace
Alexander McGibbon
Marietta Jones
Frank Weir
Nathaniel D. Drew

1878

Henri A. Lafleur
Grace Darling
Henry R. Fairclough
Andrew Lawson
William H. Boyle.
N. J. Rielle
George Kapelle
John B. Rose
Lillian Martin
Henry Cockfield
Louisa Harrison
David Young
Lawrence C. Rose
Bessie Radford
Kate McKeand
Maggie Stewart
Maggie Campbell
A. W. Martin
Florence W. Bissett
C. W. Trenholme
Robert Sterling
Maggie White
Fredrick E. Belcher
Anna Baxter
Minnie Greenshields
Emma D. Meikle
C. D. Godfrey
Lawrence MacRae
Neil McLennan.

2. *Examination for Certificates.*

1875

Charles F. Dawson
William C. Norris
William S. Kerry
Frank D. Adams

1876

William R. Robertson

1877

Annie Cusack
Lizzie Cox
Ella Gardiner
Elizabeth Monk
Jessie Logan
Alexander W. Richardson.

1878

George Ross
David McKinnon
Jane Wood
Annie Troup
Jennie Edgar
Edwin W. Griffin
Mary Troup
Herbert R. Macaulay
Jessie Stewart
Alexander Ambrose
Milton Vandewater
Julie Somerville
Maggie Osgood
Fritz G. Gnaedinger
Robert A. Elliott
Dora Scott
Fredrick F. Kingston
William H. Adams.

SCHOOL EXAMINATIONS, 1878.

Passed in the Examinations for Associate in Arts, in order of Relative Standing.

HENRI A. LAFLEUR.—(*High School, Montreal.*) Greek,* Latin,* French,* Geometry,* History,* Algebra,* English Literature,* Geography,* Gospels.*

GRACE DARLING.—(*Girls' High School, Montreal.*) Latin,* French,* German,* Geometry,* Algebra,* English Literature,* History,* Geography,* Gospels,*

HENRY R. FAIRCLOUGH.—(*Collegiate Institute, Hamilton.*) Greek, Latin,* Geometry,* Algebra,* English Language, English Literature,* Geography,* Botany,* Chemistry,* Gospels.*

ANDREW LAWSON.—(*Collegiate Institute, Hamilton.*) Greek, Latin,* Geometry,* Algebra,* Natural Philosophy,* English Language, English Literature, Geography,* Botany,* Chemistry, Gospels.*

WILLIAM H. W. BOYLE.—(*Collegiate Institute, Hamilton.*) Greek, Latin,* French,* Geometry,* Algebra,* English Language, English Literature,* Geography,* Gospels.*

NORMAN T. RIELLE.—(*Proprietary School, Montreal.*) Greek,* Latin,* German,* Geometry,* Algebra,* English Literature,* History, Geography,* Gospels.*

GEORGE KAPPELLE.—(*Collegiate Institute, Hamilton.*) Latin,* French,* German,* Geometry,* Algebra,* English Language, English Literature,* Geography, Gospels.*

JOHN BISSETT ROSE.—(*High School, Montreal.*) Greek.* Latin,* French, Geometry, Algebra, History, English Literature, Geography, Gospels.*

LILLIAN MARTIN.—(*Girls' High School, Montreal.*) Latin, French, German,* Geometry,* Algebra,* English Literature,* History,* Geography,* Botany,* Gospels.*

HENRY COCKFIELD.—(*High School, Montreal.*) Greek,* Latin,* French,* Geometry,* Algebra,* English Literature,* History, Geography, Gospels.*

LOUISA HARRISON.—(*Collegiate Institute, Hamilton.*) Latin, French, Geometry,* Algebra,* English Language, English Literature, Geography,* Botany, Chemistry, Gospels.*

DAVID YOUNG.—(*Collegiate Institute, Hamilton.*) Greek,* Latin,* Geometry,* English Literature, Algebra,* Geography,* Gospels.*

LAWRENCE C. ROSE.—(*High School, Montreal.*) Greek,* Latin,* French, Geometry,* Algebra,* English Literature,* History, Geography,* Gospels.*

BESSIE RADFORD.—(*Girls' High School, Montreal.*) Latin, French, German,* Geometry, Algebra,* English Literature,* Geography,* Botany,* Gospels,*

KATE MCKEAND.—(*Girls' High School, Montreal.*) Latin, French, Geometry,* Algebra,* English Literature,* History,* Geography,* Gospels.*

MAGGIE STEWART.—(*Collegiate Institute, Hamilton.* Latin, French,* German, Geometry,* Algebra,* English Language, English Literature, Geography* Gospels.*

MAGGIE CAMPBELL.—(*Girls' High School, Montreal.*) Latin, French, Geometry, Algebra,* English Literature,* History,* Geography,* Botany,* Gospels,*

ALFRED W. MARTIN.—(*High School, Montreal.*) Greek, Latin,* German,* Geometry, Algebra, English Literature,* History, Geography, Gospels.*

FLORENCE W. BISSETT.—(*Girls' High School, Montreal.*) Latin, French, Geometry, Algebra,* English Literature,* History,* Geography, Gospels.*

CHARLES W. TRENHOLME.—(*High School, Montreal.*) Greek, Latin, Geometry.* Algebra,* English Literature, History, Geography,* Gospels.*

ROBERT STIRLING.—(*Proprietary School, Montreal.*) Greek,* Latin,* Geometry, Algebra,* English Literature,* History, Geography, Gospels.*

MAGGIE WHITE.—(*Collegiate Institute, Hamilton.*) Latin, French, German,* Geometry, Algebra,* English Language, Geography, Gospels.*

FREDERICK G. BELCHER.—(*High School, Montreal.*) Greek,* Latin,* French, Geometry, Algebra, English Literature,* History, Geography, Gospels.*

ANNA BAXTER.—(*Girls' High School, Montreal.*) Latin, French, Algebra, English Literature,* History, Geography,* Gospels.*

MINNIE GREENSHIELDS.—(*Girls' High School, Montreal.*) Latin, French, Geometry, Algebra, English Literature,* History, Geography, Botany, Gospels.*

EMMA D. MEIKLE.—(*Lachute College.*) Latin, French, Geometry,* Algebra,* History, Geography, Gospels.

CHARLES D. GODFREY.—(*High School, Montreal.*) Latin, French, Geometry, Algebra, English Literature,* History, Geography, Gospels.*

LAWRENCE MACRAE.—(*High School, Montreal.*) Greek, Latin, French, Geometry, English Literature,* History, Geography,* Gospels.*

NEIL MCLENNAN.—(*High School, Montreal.*) Latin, French, Geometry, Algebra, English Literature, History, Geography, Gospels.*

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2. *Passed in the Examinations for Certificates, in order of Relative Standing.*

GEORGE ROSS.—(*Collegiate Institute, Hamilton.*) Latin,* Geometry,* Algebra,* Natural Philosophy, English Literature,* Geography,* Botany,* Gospels.*

DAVID MCKINNON. —(*Collegiate Institute, Hamilton.*) Latin, Geometry,* Algebra,* Natural Philosophy, English Language,* English Literature,* Geography,* Chemistry, Gospels.*

JANE WOOD.—(*Collegiate Institute, Hamilton.*) French, Geometry,* Algebra,* English Language, English Literature, Geography,* Botany, Chemistry, Gospels.*

ANNIE TROUP.—(*Collegiate Institute, Hamilton.*)—French,* German,* Geometry,* Algebra,* English Literature, Geography,* Gospels.*

JENNIE L. EDGAR.—(*Collegiate Institute, Hamilton.*) Latin,* Geometry,* Algebra,* English Language, English Literature, Geography,* Gospels.*

EDWIN W. GRIFFIN.—(*Collegiate Institute, Hamilton.*) Latin,* Geometry,* Algebra,* English Language,* English Literature,* Geography, Gospels*

MARY TROUP.—(*Collegiate Institute, Hamilton.*) French,* German,* Geometry,* Algebra,* English Literature, Geography,* Gospels.*

HERBERT R. MACAULAY.—(*High School, Montreal.*) French, Geometry,* Algebra,* English Literature,* History, Geography,* Gospels.

JESSIE STEWART.—(*Collegiate Institute, Hamilton.*) French,* Geometry,* Algebra,* English Language, English Literature,* Geography,* Gospels.*

ALEXANDER AMBROSE.—(*Collegiate Institute, Hamilton.*) Latin, Geometry,* Algebra,* English Literature, Geography, Chemistry, Gospels.*

MILTON VANDEWATER.—(*New-market, High School.*) French,* Geometry,* Algebra,* English Literature,* Geography, Gospels.*

JULIE SOMERVILLE.—(*Collegiate Institute, Hamilton.*) French, Geometry,* Algebra,* English Literature, Geography, Gospels.*

MAGGIE OSGOOD.—(*Girls' High School, Montreal.*) German,* Algebra,* English Literature,* Geography, Botany, Gospels.

FRITZ G. GNAEDINGER.—(*High School, Montreal.*) German, Geometry,* Algebra,* English Literature, Geography, Gospels.*

ROBERT A. ELLIOTT.—(*High School, Montreal.*) French, Geometry,* Algebra,* English Literature, History, Geography, Gospels.

DORA SCOTT.—(*Girls' High School, Montreal.*) German,* Algebra,* English Literature,* Botany, Gospels.*

FREDERICK F. KINGSTON.—(*High School, Montreal.*) French, Geometry, Algebra, English Literature, History, Geography, Gospels.*

WILLIAM HENRY ADAMS.—(*High School, Montreal.*) Latin, Geometry, Algebra, English Literature, Geography,* Gospels.*

EXAMINATION PAPERS

OF THE

McGILL UNIVERSITY,

MONTREAL.



SESSION OF 1877-78.

Montreal:
PRINTED BY LOVELL PRINTING AND PUBLISHING COMPANY,
ST. NICHOLAS STREET.
1878.

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FIRST YEAR EXHIBITIONS.

GREEK.

MONDAY, SEPTEMBER 17TH:—MORNING, 9 TO 12.

Examiner .....REV. GEORGE CORNISH, LL.D.

1. Translate:—

(A) Homer, Iliad, Book I?—

"Ὦ πόποι, ἦ μέγα πένθος, Ἀχαιΐδα γαῖαν ἱκάνει.
ἦ κεν γηθήσαι Πρίαμος Πριάμοιό τε παῖδες,
ἄλλοι τε Τρῶες μέγα κεν κεχαροίατο θυμῷ,
εἰ σφῶϊν τάδε πάντα πυθοίατο μαρναμένοιιν,
οἳ περὶ μὲν βουλὴν Δαναῶν, περὶ δ' ἐστὲ μάχεσθαι
ἀλλὰ πίθεσθ' · ἀμφω δὲ νεωτέρω ἐστὸν ἐμεῖο.
ἤδη γάρ ποτ' ἐγὼ καὶ ἀρείοσιν ἠέπερ ὑμῖν
ἀνδράσιν ὡμίλησα, καὶ οὔποτέ μ' οἵγ' ἀθέριζον.
οὐ γάρ πω τοίους ἴδον ἀνέρας οὐδὲ ἴδωμαι,
οἷον Πειρίθοόν τε Δρύαντά τε, ποιμένα λαῶν,
Καινέα τ' Ἐξάδιόν τε καὶ ἀντίθεον Πολύφημον
Θησέα τ' Αἰγείδην, ἐπιείκελον ἀθανάτοισιν.
κάρτιστοι δὴ κεῖνοι ἐπιχθονίων τράφεν ἀνδρῶν ·
κάρτιστοι μὲν ἔσαν καὶ καρτίστοις ἐμάχοντο,
φηρσὶν ὀρεσκῴοισι, καὶ ἐκπάγλως ἀπόλεσσαν.
καὶ μὲν τοῖσιν ἐγὼ μεθομίλεον ἐκ Πύλου ἐλθὼν,
τηλόθεν ἐξ ἀπίης γαίης · καλέσαντο γὰρ αὐτοί ·
καὶ μαχόμην κατ' ἔμ' αὐτὸν ἐγώ · κείνοισι δ' ἂν οὔτις
τῶν οἳ νῦν βροτοί εἰσιν ἐπιχθόνιοι μαχέοιτο.

(B) Xenophon, Anabasis, Book I.:—

Μετὰ τοῦτον ἄλλος ἀνέστη, ἐπιδεικνὺς μὲν τὴν εὐήθειαν τοῦ τὰ πλοῖα αἰτεῖν κελεύοντος, ὥςπερ πάλιν τὸν στόλον Κύρου μὴ ποιουμένου, ἐπιδεικνὺς δὲ ὡς εὔηθες εἴη ἡγεμόνα αἰτεῖν παρὰ τούτου, ᾧ, λυμαινόμεθα τὴν πρᾶξιν · εἰ δέ τι καὶ τῷ ἡγεμόνι πιστεύσομεν ᾧ ἂν Κῦρος διδῷ, τί κωλύει καὶ τὰ ἀκρὰ ἡμῖν κελεύειν

Κῦρον προκαταλαμβάνειν; Ἐγὼ μὲν γὰρ ὀκνοίην ἂν εἰς τὰ πλοῖα ἐμβαίνειν ἃ ἡμῖν δοίη, μὴ ἡμᾶς αὐταῖς ταῖς τριήρεσι καταδύσῃ· φοβοίμην δ' ἂν τῷ ἡγεμόνι ᾧ δοίη ἕπεσθαι, μὴ ἡμᾶς ἀγάγῃ ὅθεν οὐχ οἷόν τε ἔσται ἐξελθεῖν· βουλοίμην δ' ἂν ἀκοιτος ἀπιὼν Κύρου λαθεῖν αὐτὸν ἀπελθών, ὃ οὐ δυνατόν ἐστιν· Ἀλλ' ἐγωγε φημὶ ταῦτα μὲν φλυαρίας εἶναι· δοκεῖ δέ μοι ἄνδρας ἐλθόντας πρὸς Κῦρον, οἵτινες ἐπιτήδειοι, σύν Κλεάρχῳ ἑρωτᾶν ἐκεῖνον, τί βούλεται ἡμῖν χρῆσθαι· καὶ ἐὰν μὲν ἡ πρᾶξις ᾖ παραπλησία οἵαπερ καὶ πρόσθεν ἐχρῆτο τοῖς ξένοις, ἕπεσθαι καὶ ἡμᾶς καὶ μὴ κακίους εἶναι τῶν πρόσθεν τούτῳ συναναβάντων.

(C) Lucian, Charon :—

ΕΡΜ. Ἡράκλεις, ὡς πολὺν τὸν Ὅμηρον ἐπαντλεῖς. ἀλλ' ἐπείπερ ἀνέμνησάς με, ἐθέλω σοι δεῖξαι τὸν τοῦ Ἀχιλλέως τάφον. ὁρᾷς τὸν ἐπὶ τῇ θαλάττῃ; Σίγειον μὲν ἐκεῖνό ἐστι τὸ Τρωϊκόν· ἀντικρὺ δὲ ὁ Αἴας τέθαπται ἐν τῷ Ῥοιτείῳ.

ΧΑΡ. Οὐ μεγάλοι, ὦ Ἑρμῆ, οἱ τάφοι. τὰς πόλεις δὲ τὰς ἐπισήμους δεῖξόν μοι ἤδη, ἃς κάτω ἀκούομεν, τὴν Νίνου τὴν Σαρδαναπάλλου καὶ Βαβυλῶνα καὶ Μυκήνας καὶ Κλεωνάς καὶ τὴν Ἴλιον αὐτήν· πολλοὺς γοῦν μέμνημαι διαπορθμεύσας ἐκεῖθεν, ὡς δέκα ὅλων ἐτῶν μὴ νεωλκῆσαι μηδὲ διαψῦξαι τὸ σκαφίδιον.

ΕΡΜ. Ἡ Νίνος μέν, ὦ πορθμεῦ, ἀπόλωλεν ἤδη καὶ οὐδὲ ἴχνος ἔτι λοιπὸν αὐτῆς, οὐδ' ἂν εἴποις ὅπου ποτὲ ἦν. ἡ Βαβυλὼν δέ σοι ἐκείνη ἐστὶν ἡ εὔπυργος, ἡ τὸν μέγαν περίβολον, ου μετὰ πολὺ καὶ αὐτὴ ζητηθησομένη ὥσπερ ἡ Νίνος· Μυκήνας δὲ καὶ Κλεωνὰς αἰσχύνομαι δεῖξαι σοι, καὶ μάλιστα τὸ Ἴλιον. ἀποπνίξεις γὰρ εὖ οἶδ' ὅτι τὸν Ὅμηρον κατελθὼν ἐπὶ τῇ μεγαληγορίᾳ τῶν ἐπῶν. πλὴν ἀλλὰ πάλαι μὲν ἦσαν εὐδαίμονες, νῦν δὲ τεθνᾶσι καὶ αὗται· ἀποθνήσκουσι γάρ, ὦ πορθμεῦ, καὶ πόλεις ὥσπερ ἄνθρωποι, καὶ τὸ παραδοξότατον, καὶ ποταμοὶ ὅλοι· Ἰνάχου γοῦν οὐδὲ τάφρος ἔτι ἐν Ἄργει καταλείπεται.

2. Write down some of the principal words that take the Digamma in the poems of Homer. How is that character represented in Latin and English? Give instances. On what ground has its use originally in the Homeric poems has been inferrod?

3. Write down the proper designation and scheme of the metre of the Iliad. Scan the first six verses of extract (A) and point out any metrical peculiarities.

4. Explain carefully the use of the *oblique cases* in the following extt. :—(*a*) εἰ τῷ ἡγεμόνι πιστεύσομεν ᾧ ἂν διδῷ. (*b*) ἀκοντος ἀπιὼν Κύρου. (*c*) κόμης ἔλε Πηλείωνα. (*d*) δεινὼ δὲ οἱ ὅσσε φάανθεν. (*e*) πέμψαι προκαταληψομένους τὰ ἄκρα :—the import of the *tense* of the Participle. (*f*) οἵπερ πρόσθεν προσεκύνουν, καὶ τότε προσεκύνησαν :—the distinction of *tense*, and why?

5. (*a*) Parse carefully the following:—διέτμαγεν, ἄλτο, ἀνέσταν, μεῖναι, ἧκε, ἕλε, ἀπόφηναι, δεῖξαι, δεῖξον, μείζους, εἵκτην. ἐπαντλεῖς,—give the derivation and meaning of the last.

6. Derive and explain the following words from Homer and Xenophon; and write down the *Nom. Sing.* of the oblique cases :—
σπονδάς, ὁμοτράπεζοι, ἡνιόχων, σύνθημα, ποδήρεσι, σταθμῶν, ἐριβώλακι, κυνῶπα, ἄφενος, ῥηγμῖνι, ἀλός.

7. (*a*) Name the dialects used by Xenophon and Homer respectively, and in ext. (A) point out the instances in which the Homeric form of the word differs from that used in common Attic prose. (*b*) How do you explain such forms as the following :—*νόσφιν, χαμαί, χαμᾶζε, οἰκοθεν, πόποι*?

8. Explain briefly the historical and geographical references in ext. (C).

9. (*a*) Point out the *stems* of :—*ὄρνις, γάλα, ὕδωρ, αἰθήρ*, and *παῖς*. (*b*) Decline in all numbers :—*ὁ ψυχρὸς χειμών*; and in all genders and numbers :—*ὁ αὐτός*. (*c*) What participles has the Greek verb which are wanting in Latin?

10. Express in Greek :—1. Of the half of the book. 3. In most of the battles. 3. The half of the judges. 5. Most of the matters. 5. He has done the deed; he used to do it; he did it.

LATIN.

MONDAY, SEPTEMBER 17TH :— AFTERNOON, 2 TO 5.

Examiner..... REV. GEORGE CORNISH, LL.D.

1. Translate :—

(A) Cicero, Pro Lege Manilia :—

Quid tam novum quam adolescentulum privatum exercitum difficili rei publicae tempore conficere? Confecit. Huic praeesse? Praefuit. Rem optime ductu suo gerere? Gessit. Quid tam praeter consuetudinem quam homini peradolescenti, cuius aetas a senatorio gradu longe abesset, imperium atque exercitum dari, Siciliam permitti atque Africam bellumque in ea provincia administrandum? Fuit in his provinciis singulari innocentia, gravitate, virtute : bellum in Africa maximum confecit, victorem exercitum deportavit. Quid vero tam inauditum quam equitem Romanum triumphare? At eam quoque rem populus Romanus non modo vidit, sed omnium etiam studio visendam et concelebrandam putavit. Quid tam inusitatum quam ut quum duo consules clarissimi fortissimique essent, eques Romanus ad bellum maximum formidolosissimumque pro consule mitteretur? Missus est. Quo quidem tempore, quum esset, non nemo in senatu qui diceret *non oportere mitti hominem privatum pro consule*, L. Philippus dixisse dicitur *non se illum sua sententia pro consule, sed pro consulibus mittere*. Tanta in eo rei publicae bene gerendae spes constituebatur, ut duorum consulum munus unius adolescentis virtuti committeretur.

(B) Horace, Odes, Book I.:—

Scriberis Vario fortis et hostium
victor Maeonii carminis alite,
quam rem cumque ferox navibus aut equis
miles te duce gesserit.

Nos, Agrippa, neque haec dicere, nec gravem
Pelidae stomachum, cedere nescii,
nec cursus duplicis per mare Ulixei,
nec saevam Pelopis domum

conamur, tenues grandia ; dum pudor
imbellisque lyrae Musa potens vetat
laudes egregii Caesaris et tuas
culpa deterere ingeni.

Quis Martem tunica tectum adamantina
digne scripserit ? aut pulvere Troico
nigrum Merionen? aut ope Palladis
Tydiden Superis parem ?

Nos convivia, nos proelia virginum,
sectis in iuvenes unguibus acrium,
cantamus vacui, sive quid urimur,
non praeter solitum leves.

(C) Livy, Book V.:—

Romae interim multiplex seditio erat, cuius leniendae causa coloniam in Volscos, quo tria milia civium Romanorum scriberentur, deducendam censuerant ; triumvirique ad id creati terna iugera et septunces viritim diviserant. ea largitio sperni coepta, quia spei maioris avertendae solacium obiectum censebant : cur enim relegari plebem in Volscos, cum pulcherrima urbs Vei agerque Veientanus in conspectu sit, uberior ampliorque Romano agro ? urbem quoque urbi Romae vel situ vel magnificentia publicorum privatorumque tectorum ac locorum praeponebant. quin illa quoque actio movebatur, quae post captam utique Romam a Gallis celebratior fuit, transmigrandi Veios. ceterum partem plebis partem senatus destinabant ad habitandos Veios, duasque urbes communis rei publicae incoli a populo Romano posse. adversus quae cum optimates ita tenderent, ut morituros se citius dicerent in conspectu populi Romani quam quicquam earum rerum rogaretur : quippe nunc in una urbe tantum dissensionum esse, quid in duabus urbibus fore ? victamne ut quisquam victrici patriae praeferret, sineretque maiorem fortunam captis esse Veis quam incolumibus fuerit ? postremo se relinqui a civibus in patria posse ; ut relinquant patriam atque cives nullam vim umquam subacturam ; et T. Sicinium—is enim ex tribunis plebis rogationis eius lator erat—conditorem Veios sequantur relicto deo Romulo, dei filio, parente et auctore urbis Romae.

2. Ext. (C) :—(*a*) *Romae* ;—what case? (*b*) *Censuerant, censebant* ;—supply the subjects of these verbs. (*c*) *Scriberentur, relegari, tenderent, dicerent* ;—explain the use of the mood in each of these instances.

3. (*a*) Write short explanatory notes on the following references in ext. (B) :—(1) Vario. (2) Maeonii carminis. (3) Gravem Pelidae stomachum. (4) Saevam Pelopis domum. (5) Merionen. (6) Tydiden Superis parem. (*b*) Write down the scale of the metre and scan the first stanza of ext. (B) (*c*) Who was the person to whom this ode was addressed?

4. Explain the grammatical structure in Ext. (A) of :—(1) Praeesse, (2) abesset, (3) gravitate, (4) triumphare, (5) mitteretur, (6) diceret.

5. Analyse and parse the following verbs, giving also their principal parts :—edite, visere, natarunt, amictus, quaesieris, lacessitus, districti, depressam, prostrato, obedierint, obsolevit, collatis.

6. (*a*) Write explanatory or historical notes on the following references in Pro Lege Manilia :—(1) Rostra. (2) Vectigales et Stipendiarii. (3) Majores vestri cum Pœnis bella gesserunt. (4) Civile, servile, navale bellum. (5) Neque praeter intercessionem audiam. (6) Sed etiam Appia via jam carebamus. (*b*) What is meant specially by the term Asia, as employed by Cicero in this oration? Enumerate the countries included in its restricted sense.

7. Write down :—(*a*) The *Genitive Sing.* of senex, caro, nix, uterque, cinis. (*b*) The *Genitive Plu.* of apis, carbo, cervix, dies, nux. (*c*) The *Ablative Sing.* of mare, vis, cohors, mas, vas. (*d*) Decline in *Sing.* and *Plu.*, idem poema, mos vetus.

8. (*a*) Write down the *Comparative* and *Superlative* of :—gracilis, parvus, ultra, bene, prope. (*b*) Define the different classes of Numerals and give examples. (*c*) Give the 1*st Sing.* and *Plu.* of :—(1) the *Fut. Ind.* ; (2) the *Perf. Ind.* ; (3) the *Pres. Subjunct.* ; and (4) the *Imperf. Subjunct.*, of the following verbs :—do, rapio, eo, fio.

9. Illustrate by examples the construction of :—interest, licet, miseret, refert.

10. Translate into Latin :—1. Servants ought (*oportet*) to obey their masters. 2. Good citizens ought (*debere*) to serve the state. 3. The wise philosopher lives to do good. 4. The father exhorted his son to read much that he might become a learned man. 5. I fear he will not do it because it is too difficult.

MATHEMATICS.

TUESDAY, SEPTEMBER 18TH:—MORNING, 9 TO 12.

Examiners,..... { ALEXANDER JOHNSON, LL.D.
ARCHIBALD DUFF, M.A.

1. Inscribe a regular hexagon in a circle.

a. Prove that the triangle formed by any side and the tangents at its extremities is isosceles and that its vertical angle is four times either of the base angles.

2. In equal circles equal chords cut off equal arcs.

a. If two chords of a circle be equal, two of the lines joining their extremities will be parallel.

3. Construct a square equal to a given rectilineal figure.

4. If the square described on one side of a triangle be equal to the sum of the squares described on the other two sides, the angle subtended by that side is a right angle.

5. Inscribe a circle in a given triangle.

6. If a straight line touch a circle, and from the point of contact a straight line be drawn cutting the circle, the angles which this line makes with the line touching the circle shall be equal to the angles which are in the alternate segments of the circle.

7. If a straight line be divided into two equal, and also into two unequal parts, the squares on the two unequal parts are together double of the square on half the line and of the square on the line between the points of section.

8. A B C D is parallelogram, and E, F, the middle points of A D and B C respectively; shew that B E and D F will trisect the diagonal A C.

MATHEMATICS.

TUESDAY, SEPTEMBER 18th.—AFTERNOON 2 TO 5.

Examiners..... { ALEXANDER JOHNSON, L.L.D.
ARCHIBALD DUFF, M.A.

1. Given the first term (a), and the common difference (d) of an arithmetical series, find the sum of n terms.

2. Insert three geometrical means between 2 and 32.

3. Solve the following equations:—

$$\left\{ x^2 + xy + y^2 = 7 \quad , \quad 2x + 3y = 8 \right\};$$

$$a + x + \sqrt{a^2 + bx + x^2} = b;$$

$$\frac{x-7}{x+7} = \frac{2x-15}{2x-6} - \frac{1}{2(x+7)};$$

4. Simplify $\dfrac{\sqrt{x^2+1} + \sqrt{x^2-1}}{\sqrt{x^2+1} - \sqrt{x^2-1}} + \dfrac{\sqrt{x^2+1} - \sqrt{x^2-1}}{\sqrt{x^2+1} + \sqrt{x^2-1}}$.

5. State and prove the rule for reducing a vulgar fraction to a decimal.

6. At what price per lb. must tea which cost 47½ cents per lb. be sold in order to make a profit of 20 per cent.

7. Find a fourth proportional to ·01, ·00001, and 1, 01.

8. Solve for x nnd y.

$$x + y = a.$$
$$x^2 + y^2 = b^2.$$

9. Reduce to entire surds.

$$a\sqrt{\frac{2b}{a}}, \; 3ax\sqrt{\frac{2a}{3x}}, \; \frac{2a}{3}\sqrt[3]{\frac{9}{4a^2}}, \; (a+x)\sqrt{\frac{a-x}{a+x}}.$$

10. If $\dfrac{a}{b} = \dfrac{c}{d} = \dfrac{e}{f}$, prove that $\dfrac{a^n}{b^n} = \dfrac{ma^n + nc^n + pe^n}{mb^n + nd^n + pf^n}$.

11. Solve for x, y, and z the following:—

$$2(x-y) = 3z - 2$$
$$x + 1 = 3(y+z)$$
$$2x + 3z = 4(1-y).$$

12. Extract the square root of $.\dot{3}\dot{7}$.

13. A carpet, 18 ft. 4 in. long by 15 ft. 4 in. wide, is placed in a room 28 ft. 8 in. long by 18 ft. 6 in. wide. How much will it cost to cover the remainder with oil-cloth, at 3s. 4½d. per square yard?

14. A merchant sells hops at $33.55 per cwt., and thus gains 25 per cent on what they cost him. The market advances to $41 per cwt. Calculate his profit, if he sell more at this price.

ENGLISH LANGUAGE.

WEDNESDAY, SEPTEMBER 19TH:—MORNING, 9 TO 12.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Which are the marks by which a Noun is defined?

2. Mention the classes to which the following Nouns respectively belong:—nature, Cæsar, river, providence, Europe, law, senate, fate, fleet, water, temperance, snow, health.

3. Distinguish Material, Collective and Class Nouns.

4. How does the Pronoun differ from the Noun? Give the classes of Pronouns, with examples of each class.

5. What are Proper Adjectives?

6. Mention the circumstances that are said to determine the use of the Definite Article.

7. To what classes do the following Verbs respectively belong; the child *sees*, men *build* and time *demolishes*, Troy *was*, I *wonder* at his zeal, he *became* king, he *deposed* the king, he *appears* to grow, I *can* run, he *lays* down, he *lies* down.

8. Give some examples of the equivalents of the Adverb in composition, both phrases and clauses.

9. Mention the principal co-ordinating and subordinating Conjunctions.

10. Explain at length how Adjectives are inflected.

11. Explain the terms, voice, mood, tense, person and number, in reference to Verbs.

12. Write out the conjugation of the verb to strike.

13. Give the substance of what is said in regard to the progressive tenses of the Passive Voice.

14. How are the old or irregular Verbs conjugated?

SECOND YEAR EXHIBITIONS.

GREEK.

MONDAY, SEPTEMBER 17TH:—MORNING, 9 TO 12.

Examiner.....REV. GEORGE CORNISH, LL.D.

1. Translate:—

(A) Homer, Odyssey, Book IX.:—

Ὡς εἰπὼν ἀνὰ νηὸς ἔβην, ἐκέλευσα δ' ἑταίρους
αὐτούς τ' ἀμβαίνειν ἀνά τε πρυμνήσια λῦσαι.
οἱ δ' αἶψ' εἰσβαινον καὶ ἐπὶ κληῖσι καθῖζον,
ἑξῆς δ' ἑζόμενοι πολιὴν ἅλα τύπτον ἐρετμοῖς.
ἀλλ' ὅτε δὴ τὸν χῶρον ἀφικόμεθ' ἐγγὺς ἐόντα,
ἔνθα δ' ἐπ' ἐσχατιῇ σπέος εἴδομεν, ἄγχι θαλάσσης,
ὑψηλὸν, δάφνῃσι κατηρεφές· ἔνθα δὲ πολλὰ
μῆλ', ὄιές τε καὶ αἶγες ἰαύεσκον· περὶ δ' αὐλὴ
ὑψηλὴ δέδμητο κατωρυχέεσσι λίθοισιν
μακρῇσίν τε πίττυσσιν ἰδὲ δρυσὶν ὑψικόμοισιν.
ἔνθα δ' ἀνὴρ ἐνίαυε πελώριος, ὃς ῥά τε μῆλα
οἷος ποιμαίνεσκεν ἀπόπροθεν· οὐδὲ μετ' ἄλλους
πωλεῖτ', ἀλλ' ἀπάνευθεν ἐὼν ἀθεμίστια ᾔδη.
καὶ γὰρ θαῦμ' ἐτέτυκτο πελώριον, οὐδὲ ἐῴκει
ἀνδρί γε σιτοφάγῳ, ἀλλὰ ῥίῳ ὑλήεντι
ὑψηλῶν ὀρέων, ὅτε φαίνεται οἷον ἀπ' ἄλλων.

(B) Homer, Iliad, Book VI.:—

"Δαιμόνιε, φθίσει σε τὸ σὸν μένος οὐδ' ἐλεαίρεις
παῖδά τε νηπίαχον καὶ ἔμ' ἄμμορον, ἢ τάχα χήρη
σεῦ ἐσομαι· τάχα γάρ σε κατακτανέουσιν Ἀχαιοὶ
πάντες ἐφορμηθέντες· ἐμοὶ δέ κε κέρδιον εἴη
σεῦ ἀφαμαρτούσῃ χθόνα δύμεναι· οὐ γὰρ ἔτ' ἄλλη
ἔσται θαλπωρὴ, ἐπεὶ ἂν σύγε πότμον ἐπίσπῃς,
ἀλλ' ἄχε'· οὐδέ μοί ἐστι πατὴρ καὶ πότνια μήτηρ.
ἤτοι γὰρ πατέρ' ἀμὸν ἀπέκτανε δῖος Ἀχιλλεὺς,
ἐκ δὲ πόλιν πέρσεν Κιλίκων εὐναιετάωσαν,
Θήβην ὑψίπυλον· κατὰ δ' ἔκτανεν Ἠετίωνα,
οὐδέ μιν ἐξενάριξε, σεβάσσατο γὰρ τόγε θυμῷ,
ἀλλ' ἄρα μιν κατέκηε σὺν ἔντεσι δαιδαλέοισιν
ἠδ' ἐπὶ σῆμ' ἔχεεν· περὶ δὲ πτελέας ἐφύτευσαν
νύμφαι ὀρεστιάδες, κοῦραι Διὸς αἰγιόχοιο.
οἱ δέ μοι ἑπτὰ κασίγνητοι ἔσαν ἐν μέγάροισιν,
οἱ μὲν πάντες ἰῷ κίον ἤματι Ἄϊδος εἴσω·
πάντας γὰρ κατέπεφνε ποδάρκης δῖος Ἀχιλλεὺς,
βουσὶν ἐπ' εἰλιπόδεσσι καὶ ἀργεννῇς ὀίεσσιν.

(C) Xenophon, Hellenics, Book I.:—

Τὰ μὲν κατηγορήσων, ὦ ἄνδρες Ἀθηναῖοι, ἀνέβην ἐνθάδε Περικλέους ἀναγκαίου μοι ὄντος καὶ ἐπιτηδείου καὶ Διομέδοντος φίλου, τὰ δ' ὑπεραπολογησόμενος, τὰ δὲ συμβουλεύσων ἃ μοι δοκεῖ ἄριστα εἶναι ἁπάσῃ τῇ πολει. κατηγορῶ μὲν οὖν αὐτῶν ὅτι ἔπεισαν τοὺς συνάρχοντας βουλομένους πέμπειν γράμματα τῇ τε βουλῇ καὶ ὑμῖν ὅτι ἐπέταξαν τῷ Θηραμένει καὶ Θρασυβούλῳ τετταράκοντα καὶ ἑπτὰ τριήρεσιν ἀνελέσθαι τοὺς ναυαγούς, οἱ δὲ οὐκ ἀνείλοντο. εἶτα νῦν τὴν αἰτίαν κοινὴν ἔχουσιν ἐκείνων ἰδίᾳ ἁμαρτόντων, καὶ ἀντὶ τῆς τότε φιλανθρωπίας νῦν ὑπ' ἐκείνων τε καί τινων ἄλλων ἐπιβουλευόμενοι κινδυνεύουσιν ἀπολέσθαι· οὐκ ἂν ὑμεῖς γέ μοι πείθησθε τὰ δικαια καὶ ὅσια ποιοῦντες, καὶ ὅθεν μάλιστα τἀληθῆ πεύσεσθε καὶ οὐ μετανοήσαντες ὕστερον εὑρήσετε σφᾶς αὐτοὺς ἡμαρτηκοτας τὰ μέγιστα εἰς θεούς τε καὶ ὑμᾶς αὐτούς. συμβουλεύω δ' ὑμῖν, ἐν οἷς οὐθ' ὑπ' ἐμοῦ οὔθ' ὑπ' ἄλλου οὐδενὸς ἐστιν ἐξαπατηθῆναι ὑμᾶς, καὶ τοὺς ἀδικοῦντας εἰδότες κολάσεσθε ᾗ ἂν βούλησθε δίκῃ, καὶ ἅμα πάντας καὶ καθ' ἕνα ἕκαστον, εἰ μὴ πλέον, ἀλλὰ μίαν ἡμέραν δόντες αὐτοῖς ὑπὲρ αὑτῶν ἀπολογήσασθαι, μὴ ἄλλοις μᾶλλον πιστεύοντες ἢ ὑμῖν αὐτοῖς.

(D) Arrian, Anabasis, Book III.:—

Ταῦτα ἀκούσαντι Ἀλεξάνδρῳ ἀνὰ κράτος διωκτέα ἐφαίνετο. καὶ ἤδη μὲν ἐξέκαμνον οἵ τε ἄνδρες καὶ οἱ ἵπποι ὑπὸ τῇ ταλαιπωρίᾳ τῇ ξυνεχεῖ· ἀλλὰ καὶ ὡς ἦγε, καὶ διελθὼν ὁδὸν πολλὴν τῆς τε νυκτὸς καὶ τῆς ἐπὶ ταύτῃ ἡμέρας ἔστε ἐπὶ μεσημβρίαν ἀφικνεῖται ἐς τινα κώμην, ἵνα τῇ προτεραίᾳ ἑστρατοπεδεύκεσαν οἱ Δαρεῖον ἄγοντες. ἐνταῦθα ἀκούσας ὅτι νυκτὸς ποιεῖσθαι τὴν πορεῖαν ἐγνωσμένον εἴη τοῖς βαρβάροις, ἔλεγχε τοὺς πρωσχώρους εἰ δή τινα εἰδεῖεν ἐπιτομωτέραν ὁδὸν ἐπὶ τοὺς φεύγοντας. οἱ δὲ εἰδέναι μὲν ἔφασαν, ἐρήμην δὲ εἶναι τὴν ὁδὸν δι' ἀνυδρίαν. ὁ δὲ ταύτην ἄγειν ἐκέλευσε· καὶ γνοὺς ὅτι οὐχ ἕψονται οἱ πεζοὶ αὐτῷ σπουδῇ ἐλαίνοντι τῶν μὲν ἱππέων ἐς πεντακοσίους κατεβίβασεν ἀπὸ τῶν ἵππων· τοὺς ἡγεμόνας δὲ τῶν πεζῶν καὶ τῶν ἄλλων ἐπιλεξάμενος τοὺς κρατιστεύοντας ἐπιβῆναι τῶν ἵππων ἐκέλευσεν οὕτως ὅπως οἱ πεζοὶ ὡπλισμένοι ἦσαν. Νικάνορα δὲ τὸν τῶν ὑπασπιστῶν ἡγεμόνα καὶ Ἄτταλον τὸν τῶν Ἀγριάνων κατὰ τὴν ὁδὸν ἡντινα οἱ ἀμφὶ Βῆσσον προὐκεχωρήκεσαν τοὺς ὑπολειφθέντας ἄγειν ἐκέλευσε, καὶ τούτους ὡς κουφότατα ἐσταλμένους, τοὺς δὲ ἄλλους πεζοὺς ἐν τάξει ἕπεσθαι.

2. Write explanatory notes on the following expressions from Homer:—(*a*) *ἐλεύσσομεν* * * *φθογγὴν οἵων* (Odyss. ix., 168). (*b*) *ἀνὰ νηὸς ἔβην* (ib. 177). (*c*) *ἀνὰ πρυμνήσια λῦσαι* (ib., 178). (*d*) *κρητῆρα πανάργυρον* (ib., 203). (*e*) *ἠλίβατον πέτρην*. (*f*) *ἐμβαλέειν κώπῃς* (ib., 489). (*g*) *ἐν τ' ἄρα οἱ φῦ χειρι* (Il., vi., 407).

3. Parse the following:—*ἐγχείῃ, ἠνώγεα, σπέσσι, μίγεν, κατέδυ, πιέ κλῦθι, δέδμητο, φῦ, βῆ, στάν, ἦ.*

4. State briefly what you know of the leading theories touching the origin of the Homeric Poems.

5. (*a*) What period of the Peloponnesian War is included in the narrative of the First Book of the Hellenics? (*b*) Give an account of the transaction to which ext. (C) refers. (*c*) Institute a comparison between Xenophon and Arrian in respect of literary style and topics on which they wrote. (*d*) Name the dates and places at which they lived, respectively.

6. Where were Thurii, Gytheum, Methymna, Mitylene, Eïon Byzantium, respectively?

7. (*a*) Decline the following nouns, and name the gender of each: —κλείς, χειμών, βοῦς, λέων. (*b*) Compare μάλα, νέος, ἄνω, σαφῶς. (*c*) Decline:—ὅστις, οὐδείς, and οὗτος.

8. (*a*) Write out in full:—(1) Pres. Subj. Act. of τιμάω. (2) Pres. Opt. Mid. of δουλόω. (3) Imperf. Ind. Act. of πλέω. (4) Pluperfect of οἶδα.

9. Distinguish between:—ἐπεῖναι, ἐφιέναι, and ἐπιέναι; ἐλείφθη and ἐλήφθη; ἤδη, ἰδή, and ἥδε; ὀίων, οἶων, and οἷων; νόμος and νομός; ἵνα and ἴνα; ἀλλά, ἄλλα, and τὰ ἄλλα.

Translate into Greek:—(*a*) Half of the country was laid waste by the army that had entered it. (*b*) He made answer that he did not know whither to betake himself. (*c*) The king was wont to praise these whom he saw doiug their duty. (*d*) He was found guilty of murder and condemned to death, but afterwards escaped.

LATIN.

MONDAY, SEPTEMBER 17TH:—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

Translate:—

(A) Virgil, Æneid, Book VI.:—

Principio caelum ac terras camposque liquentis
Lucentemque globum Lunae Titaniaque astra
Spiritus intus alit, totamque infusa per artus
Mens agitat molem et magno se corpore miscet.
Inde hominum pecudumque genus vitaeque volantum
Et quae marmoreo fert monstra sub aequore pontus.

Igneus est ollis vigor et caelestis origo
Seminibus, quantum non noxia corpora tardant
Terrenique hebetant artus moribundaque membra.
Hinc metuunt cupiuntque, dolent gaudentque, neque auras
Respiciunt clausae tenebris et carcere caeco.
Quin et supremo cum lumine vita reliquit,
Non tamen omne malum miseris nec funditus omnes
Corporeae excedunt pestes, penitusque necesse est
Multa diu concreta modis inolescere miris.
Ergo exercentur poenis, veterumque malorum
Supplicia expendunt: aliae panduntur inanis
Suspensae ad ventos; aliis sub gurgite vasto
Infectum eluitur scelus, aut exuritur igni;
Quisque suos patimur manis; exinde per amplum
Mittimur Elysium, et pauci laeta arva tenemus.

(B) Horace, Odes, Book III.:—

Dum longus inter saeviat Ilion
Romamque pontus, qualibet exsules
in parte regnanto beati:
dum Priami Paridisque busto
insultet armentum, et catulos ferae
celent inultae, stet Capitolium
fulgens, triumphatisque possit
Roma ferox dare iura Medis.

Horrenda late nomen in ultimas
extendat horas, qua medius liquor
secernit Europen ab Afro,
qua tumidus rigat arva Nilus:
aurum irrepertum, et sic melius situm,
quum terra celat, spernere fortior,
quam cogere, humanos in usus
omne sacrum rapiente dextra.

Quicumque mundo terminus obstitit,
hunc tangat armis, visere gestiens,
qua parte debacchentur ignes,
qua nebulae pluviique rores.

Sed bellicosis fata Quiritibus
hac lege dico: ne, nimium pii
rebusque fidentes, avitae
tecta velint reparare Troiae.

Troiae renascens alite lugubri
fortuna tristi clade iterabitur,
ducente victrices catervas
coniuge me Iovis et sorore.

(C) Livy, Book V.:—

Sed res ipsa cogit vastam incendiis ruinisque relinquere urbem, et ad integra omnia Veios migrare, nec hic aedificando inopem plebem vexare. hanc autem iactari magis causam quam veram esse, ut ego non dicam, apparere vobis, Quirites, puto, qui meministis ante Gallorum adventum, salvis tectis publicis privatisque, stante incolumi urbe hanc eandem rem actam esse, ut Veios transmigraremus. et videte, quantum inter meam sententiam vestramque intersit, tribuni. vos, etiamsi tunc faciundum non fuerit, nunc utique faciendum putatis : ego contra — nec id mirati sitis priusquam quale sit audieritis — etiam si tum migrandum fuisset incolumi tota urbe, nunc has ruinas relinquendas non censerem. quippe tum causa nobis in urbem captam migrandi victoria esset, gloriosa nobis ac posteris nostris ; nunc haec migratio nobis misera ac turpis, Gallis gloriosa est, non enim reliquisse victores, sed amisisse victi patriam videbimur ; hoc ad Aliam fuga, hoc capta urbs, hoc circumsessum Capitolium necessitatis inposuisse, ut desereremus penates nostros, exiliumque ac fugam nobis ex eo loco consciscerem us, quem tueri non possemus.

(D) Cicero, Select Letters :—

TULLIUS ET CICERO TIRONI SUO SAL. PLUR. DIC.

Nos a te, ut scis, discessimus a. d. IIII. Non. Nov. ; Leucadem venimus a. d. VIII. Id. Nov., a. d. VII. Actium ; ibi propter tempestatem a. d. VI. Id. morati sumus. Inde a. d. V. Id. Corcyram bellissime navigavimus. Corcyrae fuimus usque ad. a. d. XVI. K. Dec. tempestatibus retenti. A. d. XV. K. in portum Corcyræorum ad Cassiopen stadia CXX. processimus ; ibi retenti ventis sumus usque ad. a. d. VIII. K. Interea, qui cupide profecti sunt, multi naufragia fecerunt. Nos eo die cenati solvimus : inde austro lenissimo, caelo sereno, nocte illa et die postero in Italiam ad Hydruntem ludibundi pervenimus, eodemque vento postridie—id erat a. d. VII. K. Dec.—hora III. Brundisium venimus, eodemque tempore simul nobiscum in oppidum introiit Terentia, quae te facit plurimi. A. D. V. K. Dec. servus Cn. Plancii Brundisii tandem aliquando mihi a te exspectatissimas litteras reddidit, datas Idibus Nov., quae me molestia valde levarunt, utinam omnino liber-assent ! sed tamen Asclapo medicus plane confirmat propediem te valentem ore.

2. (*a*) Give the derivation of the following words from Virgil, together with derivatives in English from any of them :—Fissilis, graveolens, bibulus, favilla, scrupeus, rimosus, populatus, insontes. (*b*) Explain the following usages, and give other equivalent forms of expression :—(1) Virgulta sonantia silvis. (2) Manus volnera passi. (3) Socios pura circumtulit aqua. (4) Non inferiora secutus.

3. (*a*) To whom and on what occasion was the ode from which ext. (B) is taken written ? (*b*) Name the metre of this ext. and scan the first stanza. (*c*) Explain briefly the historical or legendary references.

4. Turn ext. (C), down to 'tribuni,' into the *Oratio obliqua*, and state the rules for so doing.

5. (*a*) Expand the superscription of ext. (D), and also the following:—S. T. E. Q. V. B. E. (*b*) Give the dates of the same ext. according to our English method. Stadia cxx:—how far? Hora iv:—what o'clock? (*c*) Express in Latin, according to the Roman method of reckoning, Sept. 17th, 1877.

6. Parse the following verbs and give their principal parts:—lautus, verebare, decesse, vererere, pareret, fefellerit, adamaris, aspernabere.

7. (*a*) Into what classes are Pronouns divided in Latin? Give one instance of each, with its equivalent meaning in English. (*b*) Give the general rules for the use of *sui*, *sibi*, *se*, *suus*. (*c*) Write down the adverbs from *hic*, *ille*, and *iste*, denoting respectively, (1) rest in a place; (2) motion to a place; and (3) motion from a place.

8. (*a*) Express in Latin:—"At Rome, at Carthage, at Gades, at Athens." What is the case used? (*b*) Assign their respective cases to the following:—*patiens*, *memor*, *captus*, *egeo*, *parco*, *noceo*. (*c*) Explain the formation of the following compounds:—aufero, occupo, cogo, collega, praesidium, securus.

9. Give the meanings of the following, severally, according to the differences of quantity:— lepores, fuga, mala, mane, plaga, populus, porta, nitere, refert, severis.

HISTORY AND GRAMMAR.

TUESDAY, SEPTEMBER 18TH:—AFTERNOON, 3 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

(A) 1. Name the four great tribes of the Hellenic race, and give a tabular view of their legendary genealogy. Name the three most celebrated expeditions of the Heroic Age.

2. The four great Pan-Hellenic Festivals;—with an estimate of their uses and advantages.

3. Give the substance of Dr. Smith's remarks on the objects and results of the legislation of Lycurgus.

4. What causes led to the struggles between the Patricians and the Plebeians? What were the general results of the contention?

5. How many years did Hannibal continue in Italy, and what signal defeats did he inflict upon the Romans?

(B) 1. Parse the following verbs:— *κατασχεῖν, διακόψαι, συλλεγεῖσι, ἀφίεσαν, ἐαξα, ἐλᾶν, βλῆτο, ἔπαθον.*

2. Compound *σύν* with *καλέω, λέγω, ῥέω* and *τίθημι*

3. What cases follow the prepositions *διά, κατά, ἐκ, παρά, ἐν*, severally?

4. What cases follow *ἀκούω, χράομαι, ἡγέομαι, ἥδομαι, egeo, parco, misereor, credo.*

5. Define the meaning of the *Objective* and *Subjective Genetive*, of the *Predicative Dative*, and of the *Dativus Ethicus.*

6. Explain the use of the *Accusative* in:—*μέγιστα τιμηθῆναι, ἀλγῶ τὴν κεφαλήν*, viginti annos natus, Romam erat nunciatum.

(C) Translate into Latin:—

But the events of the last year of this struggle plainly shewed what Rome would have to fear from a coalition of all the twelve cities. Two of the Roman generals were defeated; one was killed in the battle; and the panic spread to the lines before Veii and even to Rome itself, where the rumour prevailed that the whole force of Etruria was on its march, that the camp before Veii was actually assailed by the enemy, and that his victorious bands might be expected at any moment to advance on Rome. So great was the alarm that the matrons crowded the temples to avert by prayers and sacrifices their country's peril, and the senate resolved to appoint a dictator.

MATHEMATICS.

TUESDAY, SEPTEMBER 18TH:—MORNING, 9 TO 12.

Examiners,..... { ALEXANDER JOHNSON, LL.D.
ARCHIBALD DUFF, M.A.

1. If four right lines be proportionals the similar rectilineal figures similarly described on them shall be also proportionals.

2. The radius drawn to the point of contact of the tangent to a circle is perpendicular to the tangent

3. Define the two units of angular measure in Trigonometry, and find the ratio of the larger to the smaller.

4. Prove $\sin 2A + \sin 2B = 2 \sin (A + B) \cos (A - B.)$

5. Solve the equations :—

$$\frac{7x+1}{x-1} = \frac{35}{9}\,\frac{x+4}{x+2} + 3\tfrac{1}{9}$$

$$\frac{x}{x+1} + \frac{x+1}{x} = 1\tfrac{3}{6}$$

6. If the length of a rectangular field exceed its breadth by 16 yards and its area be 960 square yards, find the length and breadth.

7. Describe a rectilineal figure which shall be similar to one given rectilineal figure and equal to another.

8. Inscribe an equilateral and equiangular pentagon in a given circle.

9. Prove $\sin A = 2 \sin \tfrac{1}{2} A \cos \tfrac{1}{2} A$.

10. In a plane triangle, the sum of the sides is to their difference in the same ratio as the tangent of half the sum of the base angles is to the tangent of half their difference.

11. Solve the following :

(*a*) $\sqrt{x} - \sqrt{a+x} = \sqrt{\frac{a}{x}}$

(*b*) $\left.\begin{matrix} x - y = 1 \\ x^3 - y^3 = 19 \end{matrix}\right\}$

12. Shew that $\sqrt{12}$, $3\sqrt{75}$, $\frac{1}{2}\sqrt{147}$, $\frac{2}{3}\sqrt{\frac{4}{75}}$, $\sqrt[4]{\frac{9}{16}}$, and $(144)^{-\frac{1}{4}}$ are similar surds.

MATHEMATICS.

TUESDAY, SEPTEMBER 18TH:—AFTERNOON, 2 TO 4.

Examiners ..... { ALEXANDER JOHNSON, LL.D.
ARCHIBALD DUFF, M.A.

1. Reciprocate the theorem that the three perpendiculars of a triangle meet in the same point.

2. Given the base and sum of sides of a triangle, the polar of the vertex with respect to one extremity of the base as origin always touches a fixed circle.

3. The anharmonic ratio of four points in a straight line is equal to that of the pencil formed by their four polars.

4. Through a given point, draw a triangle line so as to form with the sides of a given angle a triangle of given area.

5. The middle points of the three diagonals of a complete quadrilateral lie in the same straight line.

6. Two vertices of a triangle move on fixed straight lines, and the three sides pass through three fixed points which lie on a straight line; find the locus of the third vertex.

7. If a variable circle touch two fixed circles, the chord of contact passes through their external centre of similitude when the contacts are of the same kind, and through the internal centre when the contacts are of different kinds.

8. If through any point inside or outside a circle secants be drawn, the straight lines joining the extremities of the chords intersect on the polar of that point.

9. Expand a^x in a series of ascending powers of x

10. If the roots of the equation $x^3 + p\,x^2 + q\,x + r = 0$ be a, b, c, form the equation of which the roots are

$$\frac{a}{b+c}\ ,\quad \frac{b}{c+a}\ ,\quad \frac{c}{a+b}.$$

11. State and prove Descartes' rule of signs.

12. Solve the following equation, which has equal roots

$$x^4 - 11\,x^2 + 18\,x - 8 = 0.$$

13. Find the number of conbinations of n things taken r together.

14. Resolve $\dfrac{x^2 - 7\,x + 1}{(x-1)(x-2)(x-3)}$ into its partial fractions.

CHEMISTRY OF THE METALS.

THURSDAY, SEPTEMBER 20TH:—AFTERNOON, 2 TO 5.

Examiner,.....B. J. HARRINGTON, B.A., Ph.D.

1. Describe fully the manufacture of Potassic and Sodic Carbonates.

2. How are Baric Nitrate and Chloride obtained from the corresponding Sulphates?

3. By what tests may Ferric salts be distinguished from Ferrous salts when in solution?

4. What are the properties and uses of the metals Magnesium and Antimony?

5. Give the chemical formulæ of the following substances: Corrosive Sublimate, Calomel, Gypsum, and Mineral Chameleon. What are the properties of the two first of these substances?

6. Describe Marsh's test for the detection of Arsenic.

7. Explain the changes indicated by the following equations:

$$Ca\ CO_3 + CO_2 + H_2O = Ca\ H_2\ (CO_3)_2$$
$$Al_2\ (SO_4)_3 + K_2\ SO_4 = 2\ Al\ K\ (SO_4)_2$$

8. What are the principal ores of Copper, and how is the metal obtained from them?

ENGLISH LANGUAGE.

WEDNESDAY, SEPTEMBER 19TH:—MORNING, 9 TO 12.

Examiner.....VEN. ARCHDEACON LEACH, D.C.L

1. Which are the marks by which a Noun is defined?

2. Mention the classes to which the following Nouns respectively belong:—nature, Cæsar, river, providence, Europe, law, senate, fate, fleet, water, temperance, snow, health.

3. Distinguish Material, Collective and Class Nouns.

4. How does the Pronoun differ from the Noun? Give the classes of Pronouns, with examples of each class.

5. What are Proper Adjectives?

6. Mention the circumstances that are said to determine the use of the Definite Article.

7. To what classes do the following Verbs respectively belong; the child *sees*, men *build* and time *demolishes*, Troy *was*, I *wonder* at his zeal. he *became* king, he *deposed* the king, he *appears* to grow, I *can* run, he, *lays* down, he *lies* down.

8. Give some examples of the equivalents of the Adverb in composition, both phrases and clauses.

9. Mention the principal co-ordinating and subordinating Conjunctions.

10. Explain at length how Adjectives are inflected.

11. Explain the terms, voice, mood, tense, person and number, in reference to Verbs.

12. Write out the conjugation of the verb to strike.

13. Give the substance of what is said in regard to the progressive tenses of the Passive Voice.

14. How are the old or irregular Verbs conjugated?

15. In what significations is the term Prosody employed?

16. What does English Metre essentially consist in?

17. What is the meaning of *measure* in Prosody?

18. What is Blank verse—Heroic complete, Rhymes Royal, Alexandrines, Service metre?

19. Mention the conditions of a perfect rhyme.

20. Give examples of single, double and treble rhymes.

SCIENCE SCHOLARSHIPS.

I.—MATHEMATICS.

ANALYTICAL GEOMETRY.

TUESDAY, SEPTEMBER 18TH:—AFTERNOON, 2 TO 5.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Describe the *Elliptic Compasses*, stating and proving the principle on which their construction depends.

2. Find the locus of the intersection of tangents at the extremities of conjugate diameters of an ellipse.

3. The length of the chord of an ellipse which touches a confocal ellipse the squares of whose semi-axes are $a^2 - h^2$, $b^2 - h^2$, is $\frac{2\,hb'^2}{ab}$.

4. Find the equation of the polar of any point with respect to a parabola, and prove that the intercept which the polars of any two points cut off on the axis is equal to the intercept between perpendiculars from these points on that axis.

5. The sum of two focal chords of an ellipse drawn parallel to two conjugate diameters is constant.

6. Prove the following rule for finding the normal to an ellipse from any point on the axis minor:—"The circle through the point and the two foci, will meet the curve at the point whence the normal is to be drawn."

7. Find the axes of the ellipse

$$14\,x^2 - 4\,xy + 11\,y^2 = 60.$$

8. In any conic section the rectangles under the segments of two chords which intersect, are to each other as the squares of the diameters parallel to those chords.

9. Prove that if through any point, two real lines can be drawn to mee the curve at infinity, parallel lines through any other point will meet the curve at infinity.

10. Find the equation of the circle which passes through the foot of the perpendicular let fall from the vertex of a triangle on the base, and through the middle points of the two sides, taking the perpendicular and base as axes. Prove that this circle passes through the middle point of the base.

11. Find the tangents from the origin to the circle

$$x^2 + y^2 - 6\,x - 2\,y + 8 = 0$$

12. Find in trilinear co-ordinates the equation of the line joining the centres of the inscribed and circumscribing circles of a triangle.

13. Find the condition that three right lines expressed by equations in the general form shall meet in a point.

14. If a line be such that the sum of the perpendiculars let fall on it from a number of fixed points, each multiplied by a constant, may be zero, it will pass through a fixed point.

THEORY OF EQUATIONS—TRIGONOMETRY.

THURSDAY, SEPTEMBER 20TH:—MORNING 9 TO 12.

Examiner.....ALEXANDER JOHNSON, LL.D.

1. Solve the equation

$$x^4 - 12x^3 + 49x - 78x + 40 = 0$$

2. State and prove Sturm's Theorem.

3. Apply it to prove that the following equation has only one real root; and determine its situation.

$$x^3 + 6x^2 + 10x - 1 = 0$$

4. Solve the equation,—

$$x^3 - 3\,(a^2 + b^2)\,x = 2a\,(a^2 - 3b^2)$$

5. Find roots of the equation

$$x^7 - 2x^5 + x^4 + x^3 - 2x^2 + 1 = 0;$$

and depress the equation.

6. State and prove Descartes' rule of signs.

7. If the co-efficients of an equation be whole numbers, and the co-efficient of its first term unity, the equation cannot have a fractional root.

8. Prove that if in a spherical triangle E be the spherical excess.

$$\sin \tfrac{1}{2} E = \sqrt{\frac{\sin s \sin (s-a) \sin (s-b) \sin (s-c)}{2 \cos \tfrac{1}{2} a \cos \tfrac{1}{2} b \cos \tfrac{1}{2} c}}$$

9. Find the sum of n terms of the series

$$\tan \alpha + 2 \tan 2\alpha + 2^2 \tan 2^2 \alpha + \&c,$$

10. Prove that in a spherical triangle

$$\tan \tfrac{1}{2} (A - B) = \frac{\sin \tfrac{1}{2} (a - b)}{\sin \tfrac{1}{2} (a + b)} \cot \tfrac{1}{2} C.$$

11. Investigate from the beginning a formula for calculating log. 2 to the Napierian base, and calculate it to five places of decimals correctly.

12. Prove

$$\mathrm{Cos}\, m\theta = \mathrm{Cos}^m \theta - \frac{m(m-1)}{1.2} \mathrm{Cos}^{m-2} \theta \sin^2 \theta + \&c.$$

GEOMETRICAL CONIC SECTIONS—SOLID GEOMETRY—ALGEBRA.

THURSDAY, SEPTEMBER 20TH:—AFTERNOON, 2 TO 5.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. If from any point in the asymptote of an hyperbola, two ordinates be drawn to the hyperbola and its conjugate hyperbola respectively, then the tangents at the points where these ordinates cut the hyperbolas will be parallel to the diameter drawn through the same points.

2. If two chords of an hyperbola intersect one another, the rectangles contained by their segments are proportional to the squares of the diameters parallel to them.

3. The area of any parallelogram formed by drawing tangents to an ellipse at the extremities of a pair of conjugate diameters is equal to the rectangle contained by the axes of the ellipse.

4. Draw a pair of tangents to an ellipse from an external point.

5. The line joining an external point to the focus of a parabola is a mean proportional between the lines, drawn from the focus to the points of contact of the tangents drawn from the same point.

6.—The latus rectum of a parabola is four times the length of the distance from the focus to the vertex.

7. Every solid angle is contained by plane angles which are together less than four right angles.

8. If two planes which cut one another be each of them perpendicular to a third plane, their common section shall be perpendicular to the same plane.

9. Two straight lines which are each of them parallel to the same straight line, and not in the same plane with it. are parallel to one another.

10. The difference between the first and second of 4 numbers in geometrical progression is 12, and the difference between the third and fourth is 300; find them.

11. The number of variations of n things, 3 together, is to the number of variations of $n + 2$ things, 3 together, as 5 to 12; find n. Prove the formula employed.

12. Prove the Binomial Theorem for a positive integer.

DIFFERENTIAL AND INTEGRAL CALCULUS.

TUESDAY, SEPTEMBER 18TH :—MORNING, 9 TO 12.

Examiner,..... ALEXANDER JOHNSON, LL.D.

1. Find expressions for the radius of curvature, and the co-ordinates of the centre of the osculating circle to any given curve.

2. If s be the length of a curve prove

$$\frac{ds}{dx} = \sqrt{1 + \frac{dy^2}{dx^2}}$$

a. Apply the formula to find the length of an arc of the parabola by integration.

3. Eliminate a and b by differentiation from

$$y = a\, e^{2x} \sin (3x + b)$$

4. Find $\frac{dy}{dx}$ from $y^3 - 3axy + x^3 = 0$.

5. Prove that of all triangles upon the same base, and having the same perimeter, the isosceles has the greatest area.

6. Find the value, when $x = 0$, of

$$\frac{tan\ x - sin\ x}{(sin\ x)^3}$$

7. Prove that if $u = f(x)$,

$$f\left(\frac{x}{2}\right) = u - \frac{du}{dx}\cdot\frac{x}{2} + \frac{du^2}{dx^2}\cdot\frac{x^2}{2.2^2} - \frac{du^3}{dx^3}\cdot\frac{x^3}{2.3.2^3} + \&c.$$

8. Find Gregory's series for $tan^{-1} x$ by MacLaurin's Theorem.

9. Find the volume of a sphere by integration.

10. Find the integrals

$$\int_x \frac{x^m}{(a + bx + cx^2)^n}\ ;\quad \int_x \frac{x^2 - 7x + 1}{x^3 - 6x^2 + 11x - 6}\ .$$

11. Find the integrals

$$\int_x \frac{1}{(a + b\,x)\sqrt{c + e\,x}}\ ;\quad \int_x \frac{x^4}{\sqrt{1 - x^2}}\ .$$

12. Find the integrals

$$\int_x \frac{x^m}{(log\ x)^2}\ ;\quad \int_\theta cos^n\theta\ ;\quad \int_x e^{ax} sin\ k\,x\ .$$

13. Find the area of the curve whose equation is

$$y = \frac{2a}{x}\sqrt{2ax - x^2}\ .$$

LOGIC.

WEDNESDAY, SEPTEMBER 19TH:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. What is meant by a Term?

2. Define (*a*) Singular, (*b*) Common, (*c*) Concrete, (*d*) Abstract, (*e*) Connotative, (*f*) Relative, Terms, giving an example of each.

3. (*a*) What is meant by a Proposition? (*b*) Distinguish the different classes of Propositions, giving an example of each.

4. Convert the following Propositions:—
   (*a*) The memory of the just is blessed;
   (*b*) Some men are born to greatness;
   (*c*) Some articles of food are not nitrogenous;
   (*d*) No man can serve two masters.

5. State, with their names, the several Opposites of each of the Propositions given under the previous question.

6. Distinguish the different Terms and Propositions in the following Syllogism:—"The notion of Time must be *a priori*; for it is one without which experience is impossible, and all such notions are *a priori*."

7. What is meant by (*a*) the Mood, (*b*) the Figure, of a Syllogism?

8. Name the Mood and Figure of each of the following Syllogisms, and reduce them to the First Figure:—

(*a*) No x is y;	(*b*) No x is y;
All z is y;	Some x is z;
$\therefore$ No z is x.	$\therefore$ Some z is not y.

9. (*a*) What Conclusions alone can be drawn in the Third Figure? (*b*) Explain the reason.

10. (*a*) To what Figures do Felapton, Camestres, and Baroko, respectively belong? (*b*) Explain the meaning of their significant Consonants.

11. (*a*) Explain the processes which are alone legitimate in Conditional Syllogisms. (*b*) Explain the corresponding illegitimate processes, with the reason of their illegitimacy.

12. Distinguish (*a*) Logical and Non-logical, (*b*) Purely Logical and Semi-logical, Fallacies.

II.—NATURAL SCIENCE.

CHEMISTRY.

THURSDAY, SEPTEMBER 20th:—AFTERNOON, 2 TO 5.

Examiner.....B. J. HARRINGTON, B.A., Ph.D.

1. A vessel with a capacity of five litres is filled with Oxygen at the standard temperature and pressure; how many cubic centimetres of the gas will escape if the temperature rises to 14° and the barometer falls to 750 mm.?

2. Write an equation indicating the change that takes place when Sal-Ammoniac and Quicklime are mixed together.

3. Give the chemical formulæ for the following substances :—Laughing Gas, Prussic Acid, Litharge, Vermilion, and Lunar Caustic. State the difference between a rational and an empirical formula.

4. Explain what is meant by electrolysis.

5. By what hypothesis are the variations in the atomicity of an element explained? Classify the following elements according to atomicity :—Chlorine, Silver, Sulphur, Nitrogen, Carbon, Gold, and Calcium.

6. Describe fully the manufacture of Sulphuric Acid.

7. What are the chemical properties of Gold and Silver.

8. By what tests may Copper, Iron, and Zinc be detected when in solution?

9. What are the grounds for regarding the atmosphere as a mixture of different gases and not a chemical compound?

10. What are the symbols and atomic weights of Iron, Lead, Platinum, Phosphorus, and Bromine?

BOTANY (GENERAL PAPER).

TUESDAY, SEPTEMBER 18TH:—MORNING, 9 TO 12.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. What are the special characters of the Prosenchyma of Pines and the Parenchyma of Nut-shells?

2. Describe the cells of the interior of a Leaf, with the modifications of the structure in aquatic and condensed plants, and their uses.

3. Describe the principal modifications of the Anther, its various modes of dehiscence, and of the Conveyance and application of the Pollen to the Stigma.

4. Describe some of the more curious epidermal hairs or scales observed in Canadian plants.

5. Explain the changes immediately succeeding the fertilisation of the Ovule, and the structure of the ripened Seed.

6. Describe the special peculiarities of the fructification in Gymnosperms, and how this differs from that of Angiosperms.

7. Describe the flowers of a Grass, and state in what respects it differs from that of *Carex* and *Juncus*.

8. Describe fully the organs of fructification in Mosses.

9. Describe the tissues found in the bark of an Exogen, with their usual contents and modifications.

10. Give a condensed view of the natural system in Botany.

CANADIAN BOTANY.

TUESDAY, SEPTEMBER 18TH:—AFTERNOON, 2 TO 5.

1. Characterize the order *Leguminosæ*, and describe one of its generic forms.

2. What are the principal generic forms representing the orders *Papaveraceæ*, *Caprifoliaceæ*, *Orchidaceæ*, in Canada?

3. Characterize the orders *Hypericaceæ*, *Violaceæ* and *Umbelliferæ*, and name the principal generic forms of one of them.

4. Characterize shortly the orders *Cruciferæ*, *Compositæ*, *Betulaceæ* and *Liliaceæ*, and give Canadian examples.

5. By what characters would you recognize plants of the following genera?—*Anemone*, *Kalmia*, *Sarracenia*, *Aralia*.

6. Give a detailed account of any order of Canadian plants containing conspicuously flowering shrubs, with its most important species.

7. What is the distinction between *Vaccineæ* and *Ericineæ*; *Polygonum* and *Rumex*; *Salix* and *Populus*.

8. What are the principal generic forms of *Araceæ* and *Smilaceæ* in Canada?

9. Characterize the orders *Equisetaceæ* and *Lycopodiaceæ*, and describe any Canadian species.

10. Give the history, habits, and properties of any Canadian Parasitic Plant.

EXAMINATION IN SPECIMENS.

Thursday, Sept. 20th, Morning, 9 to 12.

CLASSICAL AND MODERN LANGUAGE SCHOLARSHIPS.

GREEK.

MONDAY, SEPTEMBER 17TH:—MORNING, 9 TO 12.

Examiner.....REV. GEORGE CORNISH, LL.D.

1. Translate:—(A) Euripides, Medea, vss. 1251–1270.

2. (*a*) Give the order and explain the construction of the last three verses of the above extract. (*b*) Point out any Ionic forms that occur in the same ext. (*c*) Give the Attic equivalents of the following Doricisms.—*σᾶς, γονᾶς, μάταν, κυνανεᾶν, πετρᾶν, ἀχᾶν, τάκου, δυνάσει, Ἄιδα.*

3. (*a*) *οὔ σε μὴ μεθῶ, οὐ μὴ δυσμενὴς ἔσει*:—Translate and explain the force of *οὐ μὴ* when used, (1) with the Fut. Ind.; and, (2) with the Aor. Subj. (*b*) Give the import of the propositions in:—*ἐπεὶ γενναῖος Αἰγεῦ παρ' ἐμοὶ δεδόκησαι. σοφώτερ' ἢ κατ' ἀνδρα. δέχου δὲ μὴ πρὸς ἡδονὴνε λόγους. προφέρειν εἰς εὐτυχίαν τῶν γειναμένων.*

4. (B) Translate:—Demosthenes, Olynth. III., §§ 34–37, inclusive.

5. Write short explanatory notes on:—*ἔξω τῆς ἡλικίας. εἰσεφέρετ' κατὰ συμμορίας. νομοθέτας καθίσατε. προπέποται τὰ τῆς πόλεως πράγματα. βοηδρόμια πέμψωσιν. τὰ θεωρικὰ, τὰ μυστήρια.*

6. (*a*) Define and state the difference in meaning between *λόγου τυχεῖν* and *λόγον διδόναι. θεῖναι νόμους* and *θέσθαι νόμους. γράφειν παράνομα* and *γράφεσθαι παρανόμων. εὐθύνας ἀπαιτεῖν* and *εὐθύνας ὑπέχειν. εὐθύνας ὀφλειν* and *εὐθύνας ἀποφεύγειν.* (*b*) Note various readings and metaphorical expressions in ext. (B). (*c*) Give the dates of the delivery of the Olynthiacs.

7. Translate:—(C) Xenophon, Hellenics, I.. chap. I., §§ 32–35, inclusive.
(D) Thucydides, I., chap. lxxii.
(E) Herodotus, VIII., chap. cvii.

8. Write short explanatory notes, historical or critical, on any expressions in the above extracts, that appear to you to need elucidation.

9. State the difference between:—(*a*) *ἔβησα* and *ἔβην. ἔστησα* and *ἔστην. ἔφυσα* and *ἔφυν. πέπεικα* and *πέποιθα. ὅλωλεκα* and *ὄλωλα.* (*b*) The various meanings, according to their accent, of:—*εἰμι, τιμησαι, νεων, οἰκοι, σιγα, βιος.*

10. Mention the forms, in Latin cognate with:—*χειμών, ἔαρ, αἰών, ἥλιος, ἄνεμος, νεφέλη, ὄμβρος, δίς, θύρα, σελήνη.*

LATIN.

TUESDAY, SEPTEMBER 18TH:—MORNING, 9 to 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate:—(A) Tacitus, Annals, Book I., chap. lxxiii.

2. Write short explanatory notes (grammatical) on the meaning of the following:—(*a*) Sullae *dominatio*, Crassi *potentia* (c. 1). (*b*) In Augustum cessere (ib.). (*c*) *Abolendae* magis *infamiae* (3). (*d*) Haec atque talia *agitantibus* gravescere valitudo Augusti (5). (*e*) Ambulantis Tiberii *genua advolveretur* (13). (*f*) *Causam* discordia (27). (*g*) Circumdatae stationes *stratis* (50).

3. Translate:—(B) Cicero, Select Letters, Ep. xxxvi.

4 Explain the use of the *Epistolary Imperfect*.

5. Translate:—(C) Horace, Satires I., Sat. X., vss. 72–92; and (D) Epistles I., ep. vi., vss. 56–68.

6. Explain:—(1) (*a*) Arbuscula. (*b*) Cimex Pantilius. (*c*) Ineptus Fannius. (*d*) Octavius optimus. (*e*) Mimnermus. (2) (*a*) Caerite cera. (*b*) Curule ebur. (*c*) Vilibus in ludis dictari. (*d*) Canusini more bilinguis. (*e*) Octonis Idibus. (*f*) Ad unguem factus homo.

7. Translate:—(E) Virgil, Georgics, I., vss. 316–334.

8. (*a*) Point out the poetic beauties of ext. (E). (*b*) Comment on the meaning of the following words or phrases:—parcis (vs. 4), Chaonius (8), Liber (7), Chalybes (58), Novalis (71), Improbus (119), Segnis (151), Intempestus (247), Cereale papaver (212), Genialis (320), Obscenus (470).

9. Translate:—(F) Terence Adelphi, Act II., scene 4.

10. Analyse and parse the following verbs:—siit, operiere, pepereris reprensum, insuerit, cedo, jussim, ausim, recepso, extinxem, direxti, protraxe.

11. (*a*) Put into the *Oratio Obliqua*:—'Milites mittam, qui urbem capiant.' 'Hoc mihi placet, sed vobis non placet.' 'Expedit civitati ut redeam.' (*b*) Illustrate the constructions of *Quum causale* and *Quum temporale*. (*c*) Define synonyms, and give six instances from the Latin.

GREEK AND LATIN PROSE COMPOSITION.

MONDAY, SEPTEMBER 17TH :—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

(A) Translate into Greek :—

1. Pythagoras used to say that these two excellent things had been given by the gods to men, speaking truth and doing good. 2. The king hoped that the Athenians would come out against him and not suffer their and to be laid waste. 3. Gelon after having conquered the Carthaginians at Himera, brought the whole of Sicily under his sway. 4. So long as Pericles was their leader, the Athenians performed many noble achievements.

(B) Translate into Latin :—

"Let him go then," it was said, "where he pleases as an exile, and suffer in some other place whatever Fate has reserved for him. And let us pray that the gods visit us not with their anger for ejecting Marius from our city in poverty and rags." Moved by such considerations, all in a body entered the room where Marius was, and getting round him, began to conduct him to the sea. Though every man was eager to furnish something or other, and all were busying themselves, there was a loss of time. The grove of Marica, as it is called, obstructed the passage to the sea, for it was an object of great veneration, and it was a strict rule to carry nothing out of it that had ever been carried in: and now, if they went all round it, there would of necessity be delay; but this difficulty was settled by one of the older men at last calling out, that no road was inaccessible or impassable by which Marius was saved: and he was the first to take some of the things that they were conveying to the ship, and to pass through the place.

ANCIENT HISTORY.

TUESDAY, SEPTEMBER 18th :—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Into how many parts may *History* be divided? Mention the sources of history, severally, dwelling on their comparative value and importance.

2. Enumerate the principal ancient authorities on Chronology and Geography.

3. Give an account, with dates, of the early Asiatic kingdoms.

4. What were the leading States of Greece at the time of the Persian wars? and what part did they severally take? Were there any circumstances connected with the public affairs of the Greeks that seemed to be favourable to the success of the Persians?

5. Into what periods, and on what principle, would you divide the history of Greece?

6. State briefly the constitutional changes ascribed to Solon and Cleisthenes, severally.

7. When was the office of *Praetor* first instituted at Rome? What were the duties of the office, and how were they afterwards modified? Distinguish between the *Praetor Urbanus* and the *Praetor Peregrinus*.

8. Name the date and the alleged pretext of the second Punic war. Can you point out any facts in the condition of Italy, and in the relations between its peoples and Rome, that gave encouragement to Hannibal?

9. When and why did the Romans first take a part in the affairs of Greece?

10. State generally the limits of the Roman Empire at the time of the thaed of Augustus.

ENGLISH LITERATURE.

WEDNESDAY, SEPTEMBER 19TH:—MORNING, 9 TO 12.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. What are the subjects treated of in Lord Bacon's Essays, civil and moral?

2. Give the substance of the critical remarks on the style and subject-matter of the Essays.

3. Speaking of points of Cunning, Bacon says: "It were a good deed to make a list of them;"—mention the "points of Cunning" that he enumerates.

4. Give the substance of the Essay on the subject of Judicature.

5. When it is objected to the study of the past history of our language that it is useless, what reply would you make?

6. Into what proportions may the several languages that are the elements of the present English be divided?

7. Give some exmaples of what are called double adoptions.

8. How has the Anglo-Saxon been affected in its grammatical structure by additions to its vocabulary from other languages?

9. Give the substance Trench's remarks on "The first great augmentation by foreign words of our Saxon vocabulary."

10. Give examples of new words formed from the names of persons, from different accentuation, from different spelling.

11. Mention the different motives that induce to the seeking of additions to our vocabulary.

12. Mention some of the illustrations given of the sentence quoted from Coleridge—"In order to get the full sense of a word, we should first present to our minds the visible image, &c."

13. Show how words may embody past customs.

14. Show how errors may be bound up in words.

ENGLISH LITERATURE.

WEDNESDAY, SEPTEMBER 19TH:—AFTERNOON, 2 to 5.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Describe the peculiar character of Anglo-Saxon literature, and mention the causes assigned for it.

2. Enumerate the principal prose productions in the Anglo-Saxon tongue and the principal poems.

3. Show in what respects Semi-Saxon differs from the Anglo-Saxon, and mention the principal productions in Semi-Saxon.

4. Show in what respects the Semi-Saxon differs from Middle English, and enumerate the productions of the poet Chaucer, giving a particular account of one or more of the Canterbury Tales.

5. Describe the historical conditions of the Fifteenth Century that were unfavorable to literature, and give some account of the literary productions of that century.

6. Give a historical sketch of the English drama.

7. Enumerate the principal authors during the Commonwealth and Protectorate.

8. Decline the Anglo-Saxon definite article.

9. Decline an Anglo-Saxon adjective in the indefinite form

10. Give some examples of compound proper names.

11. Decline the first and second personal pronouns.

12. Conjugate the verbs, wesan, beon, don.

13. Give the forms of comparison of adjectives and of adverbs.

14. Which are the principal prefixes and adjective suffixes?

FRENCH.

THURSDAY, SEPTEMBER 20TH:—MORNING, 9 TO 12.

Examiner.....P. J. DAREY, M.A., B.C.L.

1. Translate into English:

HENRIETTE. Je suis fort redevable à vos feux généreux.
Cet obligeant amour (*a*) a de quoi me confondre,
Et j'ai regret, monsieur, de n'y (*b*) pouvoir répondre.
Je vous estime autant qu'on saurait (*c*) estimer;
Mais je trouve un obstacle à vous pouvoir aimer.
Un cœur, vous le (*d*) savez, à deux ne saurait être;
Et je sens que du mien Clitandre s'est fait maître.
Je sais (*e*) qu'il a bien moins de mérite que vous,
Que j'ai de méchants (*f*) yeux (*g*) pour le choix d'un époux;
Que, par cent beaux talents, vous devriez me plaire:
Je vois que j'ai bien tort, mais je n'y puis que faire;
Et tout ce que sur moi peut le raisonnement,
C'est de me vouloir mal d'un tel aveuglement.

MOLIÈRE, *les Femmes savantes.*

a. What do you observe about the gender of that word?

b. Parse *y*. What part of speech does it also belong to? Give an example.

c. What do you observe about the use of this verb?

d. To what does *le* refer?

e. Write the second person singular of all the simple tenses of this verb.

f. What would be the more usual word employed to qualify *yeux*?

g. What is the singular of that word? What is the other plural? When is that plural used? Give two examples.

2. Write correctly the following Past participles, and state the rules according to which they are to be written:

Nos amis se sont *vu* et ils se sont *parlé*.
J'ai *lu* la lettre que vous m'avez *envoyé* hier.
Les enfants que j'ai *vu* étudier étaient très-attentifs.
La chanson que j'ai *entendu* chanter était charmante.

3. Translate into French.

HEARERS AND DOERS.

The clock had just struck nine. The family are rising from the breakfast table. A ring at the door-bell! The servant enters—"Sir, a young man, Mr. A's clerk, has called, and hopes you will not be offended, but he would feel particularly obliged if you would settle his account. He called twice last week. He would not trouble you if it were not a case of necessity." "Necessity or no necessity, I have not one minute to spare," replied the gentleman with a shrug of his shoulders, whilst giving the last pull to his great coat, as he was putting it on. "I am going by the next train, so bid him call again."

The gentleman was not upon the whole an unfeeling man; but carried on by the spirit of the times, railway speed, he too often did not allow himself time to reflect, or to put himself in the place of his fellow-man. Had he, in this instance, troubled himself to think, he would have seen that he had just a few minutes to spare, and would still have been in time for the train; but even had it been otherwise, his duty was too plain to be mistaken. A neglected debt had prior claim to the commercial concerns to which he was hastening.

S. Clarence.

SCOTT EXHIBITION.

ENGINEERING.—1ST PAPER.

FRIDAY, SEPTEMBER 21ST:—MORNING, 9 TO 12.

Examiner.....HENRY T. BOVEY.

1. A metre is 3,281 feet; contract a metric scale.

2. What is meant by the line of collimation in the level?

To adjust for collimation, three stations A, B, and C are chosen so that A B = B C; the level is set up at B and the reading of the staff at A is (*a*) feet, and on the staff at B is (*b*) feet; when the level is put close to A, the reading on the staff at A is (*c*) feet, and on the staff at B (*d*) feet; state what adjustment is to be made, and how you would make it.

3. Describe the method of connecting an underground survey with the survey at the surface, when the only communication is by a single shaft and state to what extent the compass may be used in underground surveying.

4. Give the prismoidal formula; and state in what cases the method of mean areas is to be used in preference.

In calculating the cubical content of a length of a cutting or embankment, shew that the error incurred by assuming the average area to be $(\frac{1}{2})$ the sum of the end areas is twice as great as the error incurred by assuming the middle section to be the average section.

5. What is a concrete?

Should the stones used in a mixture of concrete be of a uniform or irregular size? Give reasons for your answer.

Specify the qualities which the several ingredients of a mixture of concrete should possess to ensure the best possible concrete.

What advantages does concrete possess over stone as a material of construction?

6. Compare the relative advantages of egg shaped and circular culverts

A culvert 1000 ft. long discharges (n) gallons of water per minute, find by how much the discharge would be increased if, for the last 500 feet, a second culvert of the same size were laid by the side of the first, and connected with it so that the water could flow equally well along either.

7. What is the centre of pressure?

Find the centre of pressure of a triangular area subjected at all points to a uniform pressure.

A vertical row of water-tight sheet piling 30 ft. high was driven at one end of a reservoir, and had to support a pressure on one side due to a head of 25 ft. of water; it was found necessary to strengthen this dam by two rows of struts, one above the other. Find at what heights these struts should be fixed, in order that each strut might bear an equal amount of pressure.

8. It is required to prepare a sewerage scheme for a town; upon what considerations would you base your modus operandi?

9. A wall has to be built in a tidal river upon a quicksand; state how you would proceed with such work, and describe in detail the wall from the foundation to the coping, illustrating your answer by whatever sketche you may think necessary.

ENGINEERING.—2ND PAPER.

FRIDAY, SEPTEMBER 21ST:—AFTERNOON, 2 TO 4.30.

Examiner,..... .....HENRY T. BOVEY.

1. What is meant by a factor of safety?

If P be the crushing weight of concrete per square foot of area, and if f be a factor of safety, find how high it is possible to build a cylindrical column of concrete upon a base whose radius is (r) feet.

How much higher would it be possible to build a cone of concrete on the same base?

2. State the steps necessary to be taken before the letting of a contract and the commencement of the works of a line of railway.

I. In the field. II. In the office.

3. The top of a railway cutting is level across, the slopes are 2 to 1, the breadth of the bottom is 25 ft., and the depth of the cutting at the several sections 66 ft. apart is 12, 16, 21, 20, 5 and 2 ft.; find the number of cube yards of earth to be removed.

4. The centre lines of two straight reaches of railway will, if prolonged, intersect in a point whose chainage is 300 ft., and it is required to connect the two reaches by a curve of given degree; shew how to find the chainage of the points from which the curve springs.

Explain also how to set out the curve by the method of off-sets, or by any other method with which you are acquainted.

5. Show how to set out half-breadths on side-long ground.

6. Give a pen and ink sketch of a transverse section of a single line of railway, putting in the sketches all the necessary dimensions.

What materials are used as ballast?

From what kind of timber is it best to make sleepers?

7. Sketch the sections of different forms of rails, and state the advantages peculiar to each.

What is meant by the life of a rail?

8. Explain what is meant by the term "head" in hydraulics.

Calculate the discharge per minute from a pipe 2 ft. in diameter and 2000 feet long under a head of 50 feet, using a co-efficient suitable for a clean iron pipe of that diameter.

9. Define the hydraulic mean depth of a channel, and state a formula or the friction in pipes.

An open channel has a rectangular section (a) ft. broad and (b) feet eep; find the hydraulic mean depth.

Explain why in a circular culvert, having a uniform slope, the greatest velocity of a quantity of water flowing through it is attained when the culvert is not quite full.

SURVEYING AND MENSURATION.

SATURDAY, SEPTEMBER 22ND :—AFTERNOON, 2 TO 4.30.

Examiner,.....C. H. McLEOD.

1. In a closed survey, of which the following are the field-notes, the last line has been omitted, find its length and direction.

Station.	Bearing.	Distance.
1	N. 52° E.	10.60
2	S. 29 ¾° E.	4.10
3	S. 31 ¾° W.	7.70
4		

2. Describe the application of the permanent adjustments to the Surveyor's transit-theodolite.

3. Describe a method of conducting a traverse survey with the transit in which the needle should always agree with the vernier in its reading.

(*a*) When is this check not practicable?

4. Give an example of a method of keeping the field-notes in "setting out" railroad work.

5. Deduce a formula used in angular levelling for cancelling refraction by means of reciprocal observations.

(*a*) At station A the elevation of B was observed 5° 32′, at B observed depression of A was 8° 40′. The distance between A and B was 16,000 feet. Find the difference in level between A and B.

6. Show, geometrically, how a point is determined by means of bearings taken from it to three fixed points.

7. Angles are taken to a "signal" under which it is impossible to set the instrument. It is therefore set to one side. Show how to reduce the angle thus observed to the true angle at the centre of the signal.

8. The bearing of a line A B is N. 30° E. and of a line B C is S. 60° E. A B is 1,672 feet long and declines at 30°. B C declines at 15° and is 2,000 feet long Find the position of C with respect to A.

9. What part of the theodolite used to set out an arc of a circle on a level plane would require testing for adjustment?

10. Prove that the surfaces of spherical triangles are to each other as their respective spherical excesses.

11. Calculate the volume of a prolate spheroid.

DRAWING.

SATURDAY, SEPTEMBER 22ND :—MORNING, 9 TO 12.

Examiner,.....C. H. MCLEOD.

1. Construct the involute of a circle whose radius is ·75 in.

2. Project orthographically, a right hexagonal pyramid which rests upon its base and is penetrated by a right cylinder. The axes of the pyramid and cylinder bisect each other, and that of the cylinder is parallel to the planes of projection. The length of the cylinder is 3 in. and its diameter 1·1 in. The altitude of the pyramid is 3 in. and the length of a side of its base 1·5 in. One edge of the base of the pyramid is parallel to the vertical plane.

(*a*) Show the development of the pyramid so penetrated.

(*b*) Show the section of the figure made by a plane passing through the point where the axes of the pyramid and cylinder meet; the plane being perpendicular to the vertical and at an angle of 10° to the horizontal.

(*c*) Show this plane by its trace when the figure is turned on the axis of the pyramid through 10°.

3. Project the model before you isometrically.

4. Project perspectively a block of wood 4 ft. square by 1 ft. high which is surmounted by an octagonal prism of one foot side, whose height is 8 feet and upon which stands a circular block 4 feet in diameter and 1 foot in height. The axes of all three coincide. The object is in the foreground and 3 feet on the left, and one side of the base makes an angle of 30° with the picture plane.

ZOOLOGY.

THURSDAY, SEPTEMBER 20TH :—MORNING, 9 TO 12.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. Describe the structures in the skeleton of *Porifera*.

2. Characterise *Favosites*, *Stenopora*, and *Zaphrentis*, and state their places in the classification.

3. Describe the parts of a Crinoid, and mention any genera found fossil in Canada.

4. Characterise the Brachiopods, and name some Silurian genera, with description of one.

5. Explain the position of Trilobites in the class Crustacea, and give a diagram of the parts of a Trilobite.

6. How would you distinguish the shells of *Nautilus*, *Ammonites*, *Orthoceras*.

7. Describe the anatomy of *Actinia*, *Cyanea* or *Echinus*.

8. Name the orders of *Insecta*, and characterize one, with examples.

9. Describe a typical Gastropod.

10. State what you know of the specimens exhibited.

ENGLISH.

WEDNESDAY, SEPTEMBER 19TH:—AFTERNOON, 2 TO 5.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Given an account of the Constitution of the Great Council in Anglo-Saxon times.

2. Mention the principal points in the law of Feudal tenures.

3. Describe the origin and Constitution of the King's Courts, the Court of Exchequer and the Court of Common Pleas.

4. Describe the three essential principles of the Government of England established by the Commons in the reign of Edward III.

5. What are the causes assigned for the decline of literature in the latter period of the Roman Empire?

6. What are the causes assigned for the intellectual improvement of European Society during the middle ages?

7. Mention the principal incidents in the life of Cowley.

8. Give Johnson's definition of wit, and the substance of his remarks on the Metaphysical poets.

9. As to "those books that are to be read at schools,' what is Dr. Johnson's opinions as expressed in the life of Milton?

10. What is the method that Johnson employs in his critique on the Paradise Lost of Milton?

11. What is said of the subject-matter, the form and diction of the poem of Hudibras?

12. Give a historical account of the Tatler and the Spectator.

13. Give an account of the Controversy between Collier and the poets on the immorality and profaneness of the English Stage.

14. Give an outline of the life of the poet Savage.

CHRISTMAS EXAMINATIONS, 1877.

CLASSICS.

FIRST YEAR.

GREEK.—XENOPHON.—HELLENICS, BOOK I.

TUESDAY, DECEMBER 11TH:—MORNING, 9 TO 12.

Examiner.....REV. GEORGE CORNISH, LL.D.

1. Translate:—

(A) Τοῖς δὲ Συρακοσίοις καὶ Σελινουσίοις κρατίστοις γενομένοις ἀριστεῖα ἔδωκαν καὶ κοινῇ καὶ ἰδίᾳ πολλοῖς, καὶ οἰκεῖν ἀτέλειαν ἐδοσαν τῷ βουλομένῳ ἀεί· Σελινουσίοις δέ, ἐπεὶ ἡ πόλις ἀπωλώλει, καὶ πολιτείαν ἔδοσαν. οἱ δ' Ἀθηναῖοι τοὺς νεκροὺς ὑποσπόνδους ἀπολαβόντες ἀπέπλευσαν εἰς Νότιον, κακεῖ θάψαντες αὐτοὺς ἔπλεον ἐπὶ Λέσβου καὶ Ἑλλησπόντου. ὁρμοῦντες δὲ ἐν Μηθύμνῃ τῆς Λέσβου εἶδον παραπλεούσας ἐξ Ἐφέσου τὰς Συρακοσίας ναῦς πέντε καὶ εἴκοσι· καὶ ἐπ' αὐτὰς ἀναχθέντες τέτταρας μὲν ἔλαβον αὐτοῖς ἀνδράσι, τὰς δ' ἄλλας κατεδίωξαν εἰς Ἔφεσον. καὶ τοὺς μὲν ἄλλους αἰχμαλώτους Θράσυλλος εἰς Ἀθήνας ἀπέπεμψε πάντας, Ἀλκιβιάδην δὲ Ἀθηναῖον, Ἀλκιβιάδου ὄντα ἀνεψιὸν καὶ συμφυγάδα, ἀπέλυσεν. ἐντεῦθεν δὲ ἔπλευσεν εἰς τὴν Σηστὸν πρὸς τὸ ἄλλο στράτευμα· ἐκεῖθεν δὲ ἅπασα ἡ στρατιὰ διέβη εἰς Λάμψακον.

(B) Οἱ δὲ ταῦτ' ἐπῄνουν καὶ ἐκέλευον αὐτὸν τάξαι τῇ ναύτῃ δραχμὴν Ἀττικήν, διδάσκοντες ὅτι ἂν οὗτος ὁ μισθὸς γένηται, οἱ τῶν Ἀθηναίων ναῦται ἀπολείψουσι τὰς ναῦς, καὶ μείω χρήματα ἀναλώσει. ὁ δὲ καλῶς μὲν ἔφη αὐτοὺς λέγειν, οὐ δυνατὸν δ' εἶναι παρ' ἃ βασιλεὺς ἐπέστειλεν αὐτῷ ἄλλα ποιεῖν. εἶναι δὲ καὶ τὰς συνθήκας οὕτως ἐχούσας, τριάκοντα μνᾶς ἑκάστῃ νηὶ τοῦ μηνὸς διδόναι, ὁπόσας ἂν βούλωνται τρέφειν Λακεδαιμόνιοι. ὁ δὲ Λύσανδρος τότε μὲν ἐσιώπησε· μετὰ δὲ τὸ δεῖπνον, ἐπεὶ αὐτῷ προπιὼν ὁ Κῦρος ἤρετο τί ἂν μάλιστα χαρίζοιτο ποιῶν, εἶπεν ὅτι Εἰ πρὸς τὸν μισθὸν ἑκάστῳ ναύτῃ ὀβολὸν προσθείης. ἐκ δὲ τούτου τέτταρες ὀβολοὶ ἦν ὁ μισθός, πρότερον δὲ τριώβολον.

(C) Τῆς δὲ νυκτὸς ἰδὼν τὰ πυρά, καί τινων αὐτῷ ἐξαγγειλάντων ὅτι οἱ Ἀθναιοι εἶεν, ἀνήγετο περὶ μέσας νύκτας, ὡς ἐξαπιναίως προσπέσοι· ὕδωρ δ' ἐπιγενόμενον πολὺ καὶ βρονταὶ διεκώλυσαν τὴν ἀναγωγήν. ἐπεὶ δὲ ἀνέσχεν, ἅμα τῇ ἡμέρᾳ ἔπλει ἐπὶ τὰς Ἀργινούσας. οἱ δ' Ἀθηναῖοι ἀντανήγοντο εἰς τὸ πέλαγος τῷ εὐωνύμῳ, παρατεταγμένοι ὧδε. Ἀριστοκράτης μὲν τὸ εὐώνυμον ἔχων ἡγεῖτο πεντεκαίδεκα ναυσί, μετὰ δὲ ταῦτα Διομέδων ἑτέραις πεντεκαίδεκα· ἐπετέτακτο δὲ Ἀριστοκράτει μὲν Περικλῆς, Διομέδοντι δὲ Ἐρασινίδης· παρὰ δὲ Διομέδοντα οἱ Σάμιοι δέκα ναυσὶν ἐπὶ μιᾶς τεταγμένοι. ἐστρατήγει δὲ αὐτῶν Σάμιος ὀνόματι Ἵππεύς· ἐχόμεναι δ' αἱ τῶν ταξιάρχων δέκα, καὶ αὐταὶ ἐπὶ μιᾶς· ἐπὶ δὲ ταύταις αἱ τῶν ναυάρχων τρεῖς, καὶ εἴ τινες ἄλλαι ἦσαν συμμαχίδες.

2. Give the meaning as accurately as you can, and the derivatino of the following:—*ἀριστεῖα, ἀτέλειαν, πολιτείαν, ὑποσπόνδους, αἰχμαλώτους, ἀνεψιόν, δραχμήν, δεῖπνον, ὀβολόν, εὐώνυμον.*

3. (*a*) Explain the historical reference in Σελινουσίοις * * * *ἀπωλώλει* (ext. A). (*b*) Explain the use of the article in *τάξαι τῷ ναύτῃ, τοῦ μηνός*, (ext. B). (*c*) What sort of hypothetical sentence have you in —*ἂν οὗτος ὁ μισθὸς* * * * *ἀναλώσει* (ib.)? (*d*) What tense, and why, is *ἀνήγετο*(ext. C).? (*e*) What is the subject of *ἀνεσχεν* (ib.)? (*f*) Why the Plural in *μέσας νύκτας* (ib.)?

4. Translate, and explain the construction of the following ext.:—(*a*) *Φάσκων κελεύειν βασιλέα πολεμεῖν Ἀθηναίοις.* (*b*) *ἡμέραις δὲ τριάκοντα ὕστερον Ἀλκιβιάδης ἐκ Σάρδεων μετὰ Μαντιθέου τοῦ Ἀλόντος ἐν Καρίᾳ ἵππων εὐπορήσαντες νυκτὸς ἀπέδρασαν εἰς Κλαζομενάς.* (*c*) *ἀνήχθη εὐθὺ Γυθείου ἐπὶ κατασκοπῇ τῶν τριήρων, καὶ τοῦ οἰκαδε κατάπλου ὅπως ἡ πόλις πρὸς αὐτον ἔχει.*

5. Parse the following words:—*ἔφθη, πεπονθέναι, φοιτήσεσιν,* Πιτύα, *ἀφεῖσαν, τολμήσαι, ἀπεσώθη, εἰσέσθαι, ἀναλώσει, ἡγεῖτο, ἐπετέτακτο, προπιών.*

6. State the difference in meaning between:—*ἀνδράποδα* and *δοῦλα. εὐθὺς* and *εὐθύ. ἡ πυρὰ* and *τὰ πυρά. ἡ ἀριστεία* and *τὰ ἀριστεῖα. ἐξηγεῖσθαί τινος* and *ἐξηγεῖσθαί τινι. ὁ νεὼς* and *τῆς νεώς. ἀλλὰ* and *ἄλλα. ἀγγεῖλαι* and *ἀγγεῖλαι.*

7. Give the geographical situation of the following places:—Cyzicus, Caria, Madytus, Sestus, Proconnesus (give the derivation), Perinthus, Syracuse, Thurii.

8. (*a*) Decline (using the appropriate article with each):—*νυκτός, λιμένος, πλοίων, χρήματα, τείχη, μηνός.* (*b*) Write down the Comparative and Superlative of:—*γλυκύς, μέγας, σαφής, δεινός, καλός.* (*c*) Decline:—*οὗτος, τίς, εἷς, ὅστις.*

9. (*a*) What is meant by *Augment* and *Reduplication*, severally? What Tenses take these? (*b*) What is the derivation and grammatical meaning of the term *Aorist?* State the distinction between the Imperfect, Perfect, and Aorist Tenses. (*c*) Name the Tenses distinguishing between the *primary* and the *historic* tenses. Whence the latter term?

10. Write down the principal parts (1st Sing.), of:—*τρέπω, πάσχω ἐλαύνω, ἔχω, ἵστημι.*

SECOND YEAR.

GREEK.—EURIPIDES.—MEDEA.

TUESDAY, DECEMBER 11TH:—MORNING, 9 TO 12.

Examiner ..... REV. GEORGE CORNISH, LL.D

1. Translate:—

(A)
ΜΗ. *μὴ, πρός σε γονάτων τῆς τε νεογάμου κόρης.*
ΚΡ. *λόγους ἀναλοῖς· οὐ γὰρ ἂν πείσαις ποτέ.*
ΜΗ. *ἀλλ' ἐξελᾷς με, κοὐδὲν αἰδέσει λιτάς;*
ΚΡ. *φιλῶ γὰρ οὐ σὲ μᾶλλον ἢ δόμους ἐμούς.*
ΜΗ. *ὦ πατρὶς, ὡς σου κάρτα νῦν μνείαν ἔχω.*
ΚΡ. *πλὴν γὰρ τέκνων ἐμοιγε φίλτατον πόλις.*
ΜΗ. *φεῦ φεῦ· βροτοῖς ἔρωτες ὡς κακὸν μέγα.*
ΚΡ. *ὅπως ἄν, οἶμαι καὶ παραστῶσιν τύχαι.*
ΜΗ. *Ζεῦ, μὴ λάθοι σε τῶν δ' ὃς αἴτιος κακῶν.*
ΚΡ. *ἔρπ' ὦ ματαία, καὶ μ' ἀπάλλαξον πόνων.*
ΜΗ. *πονοῦμεν ἡμεῖς κοὐ πόνων κεχρήμεθα.*
ΚΡ. *τάχ' ἐξ ὀπαδῶν χειρὸς ὠσθήσει βίᾳ.*
ΜΗ. *μὴ δῆτα τοῦτό γ', ἀλλά σ' αἰτοῦμαι, Κρέον.*
ΚΡ. *ὄχλον παρέξεις, ὡς ἔοικας, ὦ γύναι.*
ΜΗ. *φευξούμεθ'· οὐ τοῦθ' ἱκέτευσα σοῦ τυχεῖν.*
ΚΡ. *τί δ' οὖν βιάζει κοὐκ ἀπαλλάσσει χθονός;*

(B) ΧΟ. *ἔρωτες ὑπὲρ μὲν ἄγαν ἐλθόντες οὐκ εὐδοξίαν*
οὐδ' ἀρετὰν παρέδωκαν ἀνδρασιν· εἰ δ' ἅλις ἔλθοι
Κύπρις οὐκ ἄλλα θεὸς εὐχαρις οὕτω
μήποτ', ὦ δέσποιν', ἐπ' ἐμοὶ χρυσέων τόξων ἐφείης
ἱμέρῳ χρίσασ' ἄφυκτον οἰστόν.
στέργοι δέ με σωφροσύνα, δώρημα κάλλιστον θεῶν.

μηδὲ ποτ' ἀμφιλόγους ὀργὰς ἀκόρεστά τε νείκη
θυμὸν ἐκπλήξασ' ἑτέροις ἐπὶ λέκτροις
προσβάλοι δεινὰ Κύπρις, ἀπτολέμους δ' εὔνας σεβίζους'
ὀξύφρων κρίνοι λέχη γυναικῶν.
ὦ πατρὶς, ὦ δῶμά τ' ἐμὸν,
μὴ ὄῆτ' ἄπολις γενοίμαν
τὸν ἀμαχανίας ἔχουσα δυσπέρατον αἰῶν'
οἰκτροτάτων ἀχέων.
θανάτῳ θανάτῳ πάρος δαμείην
ἀμέραν τανδ' ἐξανύσασα· μόχθων δ' οὐκ ἄλλος ὕπερθεν ἢ γᾶς
πατρίας στέρεσθαι.

(C) νῦν οὖν ἐπαινῶ, σωφρονεῖν τε μοι δοκεῖς
κῆδος τόδ' ἡμῖν προσλαβὼν, ἐγὼ δ' ἄφρων,
ἢ χρῆν μετεῖναι τῶνδε τῶν βουλευμάτων
καὶ ξυμπεραίνειν καὶ παρεστάναι λέχει,
νύμφην τε κηδεύουσαν ἥδεσθαι σέθεν.
ἀλλ' ἐσμὲν οὐόν ἐσμεν, οὐκ ἐρῶ κακὸν,
γυναῖκες· οὔκουν χρή σ' ὁμοιοῦσθαι κακοῖς,
οὐδ' ἀντιτείνειν νήπι' ἀντὶ νηπίων.
παριέμεσθα, καί φαμεν κακῶς φρονεῖν
τότ', ἀλλ' ἀμεινον νῦν βεβούλευμαι τάδε.
ὦ τέκνα τέκνα, δεῦτε, λείπετε στέγας,
ἐξέλθετ', ἀσπάσασθε καὶ προσείπατε
πατέρα μεθ' ἡμῶν, καὶ διαλλάχθηθ' ἅμα
τῆς πρόσθεν ἐχθρας ἐς φίλους μητρὸς μέτα·
σπονδαὶ γὰρ ἡμῖν, καὶ μεθέστηκεν χόλος.
λάβεσθε χειρὸς δεξιᾶς. οἰμοι κακῶν·
ὡς ἐννοοῦμαι δή τι τῶν κεκρυμμένων.

2. Construe carefully the oblique cases in the following, explaining the usage:—(1) *ὧν ἐρᾷ τυχεῖν.* (2) *συλλήψομαι τοῦδέ σοι πόνου.* (3) *ξυμβάλλεται πολλὰ τοῦδε δείματος.* (4) *προθήσει χρημάτων.* (5) *ἢ χρῆν μετεῖναι τῶνδε τῶν βουλευμάτων.* (6) *κοὐ πόνων κεχρήμεθα.* (7) *κείνους κλαίω ξυμφορᾷ κεχρημένους.*

3. *φόβος εἰ πείσω,—οὐκ οἰδ' ἂν εἰ πείσαιμι,—οὔ σε μὴ μεθῶ,—οὐ μὴ δυσμενὴς ἔσει,—οἶσθ' ὡς μετεύξει.*—Discuss the meaning of these forms of expression, severally, and express it in Latin where you can.

4. (*a*) *πρὸς ἡδονὴν λόγους. ἐμαυτῇ διὰ λόγων ἀφικόμην. πρὸς γῆρας οὐκ εὐδοξον. μὴ πρὸς ἰσχύος χάριν*:—Explain the import of the prepositions. (*b*) *ἀτιμάσας ἔχει. γυνὴ δὲ θῆλυ ἔφυ. γυνὴ δὲ θῆλυς οὖσα* (Soph.). *οὐδὲ ταῦτ' ἐπῄνεσα. ὡς τί χρῄζων τήνδε ναυστολεῖς χθόνα. καὶ γὰρ ἠδικημένοι σιγησόμεσθα* (Medea). Comment on and explain these usages.

5. Give the meaning and etymology of the following :—*δέργμα, ἀρτίφρων, ἐξηντλημένα, ἁπλάτου, σκαιούς, προσάντες, ἐχεγγύους, ἀβρῶς, κίβδηλος, χλωρόν.*

6. Parse the following :—*μολόντας, ἐξηύχου, δηχθείη, σφέ, κάλων, ἐκβαλεῖν, ἀμφιθῇ, μεθῶ, εἶλου, σίγα, τάκου, ἐξελᾷς.*

7. Resolve the following crases :—*τοὔπος, χὠ, τἄρα, χαὐτή, ἀνήρ, ὦν, κἄν, κἀν.*

8. (*a*) Give the Greek for ;—'at home,' 'from home,' 'to home,' 'at Athens.' (*b*) Distinguish between :—(1) *μετὰ σοῦ,—μετὰ σέ.* (2) *δι' αὐτοῦ—δι' αὐτόν. ἐπ' ἐμοῦ—ἐπ' ἐμοί,* and *ἐπ' ἐμέ.* (*c*) Distinguish between the significations of the following, according to their difference of *spiritus* or *accent*, severally :—*εν, ου, οδους, ους, η, ανα, δια.*

9. Write down the scheme (1) of the Iambic Trimeter Acatalectic of the Tragedians ; and, (2) of the Anapaestic Dimeter Acatalectic indicating the isochonous feet. Scan the last four verses of (A).

10. A short account of Euripides.

THIRD YEAR.

GREEK.—LYSIAS.—CONTRA ERATOSTHENEM.

WEDNESDAY, DECEMBER 12TH :—MORNING, 9 TO 12.

Examiner.....REV. GEORGE CORNISH, LL.D.

1. Translate :—

(A) *Θαυμάζω δὲ τί ἄν ποτε ἐποίησας συνειπών, ὁπότε ἀντειπεῖν φάσκων ἀπέκτεινας Πολέμαρχον. φέρε δή, τί ἂν εἰ καὶ ἀδελφοὶ ὄντες ἐτύχετε αὐτοῦ ἢ καὶ υἱεῖς; ἀπεψηφίσασθε; δεῖ γάρ, ὦ ἄνδρες δικασταί, Ἐρατοσθένην δυοῖν θάτερον ἀποδεῖξαι, ἢ ὡς οὐκ ἀπήγαγεν αὐτόν, ἢ ὡς δικαίως τοῦτ' ἔπραξεν. οὗτος δὲ ὡμολόγηκεν ἀδίκως συλλαβεῖν, ὥστε ῥᾳδίαν ὑμῖν τὴν διαψήφισιν περὶ αὐτοῦ πεποίηκε. Καὶ μὲν δὴ πολλοὶ καὶ τῶν ἀστῶν καὶ τῶν ξένων ἤκουσιν εἰσόμενοι τίνα γνώμην περὶ τούτων ἕξετε. ὧν οἱ μὲν ὑμέτεροι ὄντες πολῖται μαθόντες ἀπίασιν ὅτι ἢ δίκην δώσουσιν ὧν ἂν ἐξαμάρτωσιν, ἢ πράξαντες μὲν ὧν ἐφίενται τύραννοι τῆς πόλεως ἔσονται, δυστυχήσαντες δὲ τὸ ἴσον ὑμῖν ἕξουσιν· ὅσοι δὲ ξένοι ἐπιδημοῦσιν, εἴσονται πότερον ἀδίκως τοὺς τριάκοντα ἐκκηρύττουσιν ἐκ τῶν πόλεων ἢ δικαίως.*

(B) Τῶν μὲν μαρτύρων ἀκηκόατε. τὸ δὲ τελευταῖον εἰς τὴν ἀρχὴν καταστὰς ἀγαθοῦ μὲν οὐδενὸς μετέσχεν, ἄλλων δὲ πολλῶν. καίτοι εἴπερ ἦν ἀνὴρ ἀγαθός, ἐχρῆν ἂν πρῶτον μὲν μὴ παρανόμως ἀρχειν, ἔπειτα τῇ βουλῇ μηνυτὴν γίνεσθαι περὶ τῶν εἰσαγγελιῶν ἁπασῶν, ὅτι ψευδεῖς εἶεν, καὶ Βάτραχος καὶ Αἰσχυλίδης οὐ τἀληθῆ μηνύουσιν, ἀλλὰ τὰ ὑπὸ τῶν τριάκοντα πλασθέντα εἰσαγγέλλουσι, συγκείμενα ἐπὶ τῇ τῶν πολιτῶν βλάβῃ. καὶ μὲν δή, ὦ ἄνδρες δικασταί, ὅσοι κακόνοι ἦσαν τῷ ὑμετέρῳ πλήθει, οὐδὲν ἔλαττον εἶχον σιωπῶντες· ἕτεροι γὰρ ἦσαν οἱ λέγοντες καὶ πράττοντες ὧν οὐχ οἷόν τ' ἦν μείζω κακὰ γενέσθαι τῇ πόλει. ὁπόσοι δ' εὐνοί φασιν εἶναι, πῶς οὐκ ἐνταῦθα ἔδειξαν, αὐτοί τε τὰ βέλτιστα λέγοντες καὶ τοὺς ἐξαμαρτάνοντας ἀποτρέποντες.

(C) Ὑμεῖς δέ, ὦ ἄνδρες Ἀθηναῖοι, πραττούσης μὲν τῆς ἐν Ἀρείῳ πάγῳ βουλῆς σωτήρια, ἀντιλεγόντων δὲ πολλῶν Θηραμένει, εἰδότες δὲ ὅτι οἱ μὲν ἄλλοι ἀνθρωποι τῶν πολεμίων ἕνεκεν τἀπόρρητα ποιοῦνται, ἐκεῖνος δ' ἐν τοῖς αὐτοῦ πολίταις οὐκ ἠθέλησεν εἰπεῖν ταῦτα ἃ πρὸς τοὺς πολεμίους ἐμελλεν ἐρεῖν, ὅμως ἐπετρέψατε αὐτῷ πατρίδα καὶ παῖδας καὶ γυναῖκας καὶ ὑμᾶς αὐτούς. ὁ δὲ ὢν μὲν ὑπέσχετο οὐδὲν ἔπραξεν, οὕτως δὲ ἐνετεθύμητο ὡς χρὴ μικρὰν καὶ ἀσθενῆ γενέσθαι τὴν πόλιν, ὥστε περὶ ὧν οὐδεὶς πώποτε οὔτε τῶν πολεμίων ἐμνήσθη οὔτε τῶν πολιτῶν ἤλπισε, ταῦθ' ὑμᾶς ἔπεισε πρᾶξαι, οὐχ ὑπὸ Λακεδαιμονίων ἀναγκαζόμενος, ἀλλ' αὐτὸς ἐκείνοις ἐπαγγελλόμενος, τοῦ τε Πειραιῶς τὰ τείχη περιελεῖν καὶ τὴν ὑπάρχουσαν πολιτείαν καταλῦσαι, εὖ εἰδὼς ὅτι, μὴ πασῶν τῶν ἐλπίδων ἀποστερηθήσεσθε, ταχεῖαν παρ' αὐτοῦ τὴν τιμωρίαν κομιεῖσθε.

2. Write explanatory notes on the following expressions, occurring in this oration :—(*a*) ἀποψηφίζεσθαι. (*b*) καταψηφίζεσθαι. (*c*) ἐξεκλησιάζετε. (*d*) μετοικοῦντας. (*e*) τὰς χορηγίας. (*f*) εἰσφοράς. (*g*) δίκην οὔτε ἐδικασάμεθα οὔτε ἐφύγομεν. (*h*) τριηραρχήσαντες.

3. Explain briefly the following historical allusions :—(*a*) εἰ τοὺς μὲν στρατηγούς, οἳ ἐνίκων ναυμαχοῦντες, θανάτῳ ἐζημιώσατε. (*b*) Θρασυβούλου Φυλὴν κατειληφότος. (*c*) Λυσανδρον ἄρχοντα ἠτήσατο. (*d*) ὁ πατὴρ αὐτοῦ τῶν προβούλων ὤν. (*e*) οἱ καθεστηκότες ἔφοροι.

4. Give the grammatical construction of the following extracts :—(*a*) οὐκ ἀρξασθαί μοι δοκεῖ ἄπορον εἶναι τῆς κατηγορίας, ἀλλὰ παύσασθαι λέγοντι. (*b*) ἕως ἂν θανάτου δόξῃ τῷ φύγοντι ἄξια εἰργάσθαι. (*c*) συμβουλεύω μὴ τούτων ἀποψηφισαμένους ὑμῶν αὐτῶν καταψηφίσασθαι.

5. State the exact import of the prepositions in the following extracts :—(*a*) οἱ ἐπὶ ξένης. (*b*) οἱ ἐξ ἄστεος. (*c*) ἐπὶ τῇ τῶν πολιτῶν βλάβῃ. (*d*) ἐπὶ τῶν τετρακοσίων. (*e*) οὐ γὰρ ἐξῆν ἡμῖν παρ' αὐτοῖς εἶναι ὥστ' ἐπὶ τούτοις ἐστι πάντα τἀγαθὰ περὶ αὐτῶν λέγειν.

6. Analyse and parse the following verbs:—*δεδιώς, εἴσεσθαι, ἀκηκόατε, πεπόνθατε, ἀφῃρέθητε, ἐκτῶντο, ψηφιεῖσθε, συνερούντων, ἤδεσαν, ἔλοισθε, ἐξενεχθῆναι, ἐνετεθύμητο.*

7. A sketch of the life of Lysis. What was the political and social position of his family and of himself at Athens? How many speeches is he said to have written? How many are extant? How many were spoken by himself?

8. The date and attendant circumstances of the delivery of the speech *Contra Eratosthenem*, State what you know of the Court before which it was spoken, in respect of its composition and functions.

9. (*a*) Explain the uses and force of the following particles, or combinations of particles, severally:—*ὥστε μή. νῦν δέ. καὶ μήν. οὐκοῦν. οὔκουν. οὐ μήν. οὐ γὰρ δή που. καὶ δὴ καί. ἆρα. ἀλλὰ γάρ.* (*b*) To what does the Verbal adjective correspond in Latin? How is it formed, and what are its constructions? (*c*) Illustrate its constructions by translating into Greek:—'I must do these things.' 'We must punish (*κολάζω*) the wicked.'

FIRST YEAR.

LATIN.—VIRGIL.—ÆNEID, BOOK VI.

TUESDAY, DECEMBER 11TH:— AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate:—

(A) Olli sic breviter fata est longaeva sacerdos:
Anchisa generate, deum certissima proles,
Cocyti stagna alta vides Stygiamque paludem,
Di cuius iurare timent et fallere numen.
Haec omnis, quam cernis, inops inhumataque turba est;
Portitor ille Charon; hi, quos vehit unda, sepulti.
Nec ripas datur horrendas et rauca fluenta
Transportare prius, quam sedibus ossa quierunt.
Centum errant annos volitantque haec litora circum;
Tum demum admissi stagna exoptata revisunt.
Constitit Anchisa satus et vestigia pressit,
Multa putans, sortemque animi miseratus iniquam.

(B) Respicit Aeneas subito, et sub rupe sinistra
Moenia lata videt, triplici circumdata muro,
Quae rapidus flammis ambit torrentibus amnis,
Tartareus Phlegethon, torquetque sonantia saxa.
Porta adversa, ingens, solidoque adamante columnae,
Vis ut nulla virum, non ipsi exscindere bello
Caelicolae valeant; stat ferrea turris ad auras,
Tisiphoneque sedens, palla succincta cruenta,
Vestibulum exsomnis servat noctesque diesque.
Hinc exaudiri gemitus, et saeva sonare
Verbera; tum stridor ferri, tractaeque catenae.
Constitit Aeneas, strepituque exterritus haesit.

(C) Atque hic Aeneas; una namque ire videbat
Egregium forma iuvenem et fulgentibus armis,
Sed frons laeta parum, et deiecto lumina voltu:
Quis, pater, ille, virum qui sic comitatur euntem?
Filius, anne aliquis magna de stirpe nepotum?
Qui strepitus circa comitum! quantum instar in ipso!
Sed nox atra caput tristi circumvolat umbra.
Tum pater Anchises, lacrimis ingressus obortis:
O gnate, ingentem luctum ne quaere tuorum;
Ostendent terris hunc tantum fata, neque ultra
Esse sinent. Nimium vobis Romana propago
Visa potens, Superi, propria haec si dona fuissent.
Quantos ille virum magnam Mavortis ad urbem
Campus aget gemitus! vel quae, Tiberine, videbis
Funera cum tumulum praeterlabere recentem!

2. (*a*) Translate and explain carefully the construction of :—

Manibus date lilia plenis,
Purpureos spargam flores, animamque nepotis
His saltem adcumulem donis, et fungar inani
Munere.

(*b*) Mention the cases and explain the construction of the words in Italics in :—(1) *Hac vice* sermonum *roseis* Aurora *quadrigis* medium *aetherio cursu* trajecerat axem. (2) Septem una *sibi muro* circumdabit arces. (3) Desueta *triumphis*. (4) Nigrantis *terga* juvencos. (5) *Atri velleris* agnam. (6) *Animi* miseratus. (7) *Fulgentibus armis*.

3. Write short explanatory notes on :—(*a*) *Longaeva* sacerdos. (*b*) *Euboicis* oris. (*c*) *Altus* Apollo. (*d*) Conjunx *hospita* Teucris. (*e*) Dixit, *novissima verba*. (*f*) *Phlegyas* miserrimus. (*g*) *Berecyntia* mater. (*h*) *Aeripedem* cervam.

4. Parse (giving the first Sing. Present, Perfect, and Future, Indicati. of each,) the following verbs :—attigerint, districti, sequere, elata, strictam, desueta, laetere, edŭcet, ŭcet, passi, torsit, utĕre, fusi, miserate.

5. (*a*) Show the component parts of the following words, and give their meaning :—resides, postuma, passim, caminis, seclusum, securos, sublimis, inmanis, cognomine, exsomnis. (*b*) Note words in English either *cognate* with or *derived* from any of the above.

6. Describe the geographical situations of :—Lerna, Moeotia tellus, Marpesia cautes, Caietae portum, Minoia regna, Simois, Garamantas.

7. (*a*) Write down the name and scale of the metre used by Virgil, and scan the first four vss. of ext. (C). (*b*) Decline :—comes, senex, idem, iste. Compare :—miser, vetus, similis, nequam. (*c*) What cases do the following severally govern ?—coram, pro, tenus, sub, pudet, decet.

8. Define the following terms, with illustrations from Virgil :— *Archaism*, *Asyndeton*, *Enallage*, *Hendiadys*, *Zeugma*, *Hysteron proteron*.

SECOND YEAR.

LATIN.—HORACE.—EPISTLES, BOOK I.

TUESDAY, DECEMBER 11TH :—AFTERNOON, 2 TO 5.

Examiner,..... .....REV. GEORGE CORNISH, LL.D.

1. Translate :—

(A) Ut proficiscentem docui te saepe diuque
Augusto reddes signata volumina, Vini,
Si validus, si laetus erit, si denique poscet;
Ne studio nostri pecces odiumque libellis
Sedulus importes opera vehemente minister.
Si te forte meae gravis uret sarcina chartae,
Abjicito potius quam quo perferre juberis
Clitellas ferus impingas, Asinaeque paternum
Cognomen vertas in risum et fabula fias.
Viribus uteris per clivos, flumina, lamas;
Victor propositi simul ac perveneris illuc,
Sic positum servabis onus, ne forte sub ala
Fasciculum portes librorum, ut rusticus agnum,
Ut vinosa glomus furtivae Pyrrhia lanae,
Ut cum pileolo soleas conviva tribulis.
Ne vulgo narres te sudavisse ferendo
Carmina, quae possint oculos auresque morari
Caesaris; oratus multa prece nitere porro.
Vade, vale, cave ne titubes mandataque frangas.

(B) Exilis domus est ubi non et multa supersunt
Et dominum fallunt et prosunt furibus. Ergo,
Si res sola potest facere et servare beatum,
Hoc primus repetas opus, hoc postremus omittas.
Si fortunatum species et gratia praestat,
Mercemur servum qui dictet nomina, laevum
Qui fodicet latus et cogat trans pondera dextram
Porrigere. "Hic multum in Fabia valet, ille Velina;
Cui libet hic fasces dabit eripietque curule
Cui volet importunus ebur." Frater, Pater, adde;
Ut cuique est aetas ita quemque facetus adopta.

(C) Laudibus arguitur vini vinosus Homerus;
Ennius ipse pater nunquam nisi potus ad arma
Prosiluit dicenda. Forum putealque Libonis
Mandabo siccis, adimam cantare severis:
Hoc simul edixi, non cessavere poetæ
Nocturno certare mero, putere diurno.
Quid, si quis vultu torvo ferus et pede nudo
Exiguæque togæ simulet textore Catonem,
Virtutemne repræsentet moresque Catonis?
Rupit Iarbitam Timagenis æmula lingua,
Dum studet urbanus tenditque disertus haberi.
Decipit exemplar vitiis imitabile; quod si
Pallerem casu, biberent exsangue cuminum.

2. Mention the cases, and explain the construction, of the words in Italics in the follwing extt:—(*a*) Nitidum bene *curata cute*. (*b*) Coronari *Olympia*. (*c*) *Excepto* quod non simul esses, *caetera* laetus. (*d*) *Quo mihi fortunam* si non conceditur uti? (*e*) Scribe *tui gregis*. (*f*) Cæsaris *genibus* minor. (*g*) Detulerit fasces *indigno*. (*h*) Nec *verbo* parcius absens.

3. How do you explain the following usages? (*a*) *Nodosa* corpus prohibere *cheragra*. (*b*) Atqui rerum caput hoc *erat*. (*c*) Indigni fraternum *rumpere* foedus. (*d*) Liber *mihi* non erit unquam. (*e*) Si curas esse quod *audis*. (*f*) Hæc tibi *dictabam*. (*g*) *Quod* te per genium obsecro. (*h*) Domini *deduxit* febres.

4. Give the meaning and derivation of the following words:—Camena, tenus, sodes, catellam, periscelidem, diludia, personam, catellus, fenore, cœnacula, supellex, exilis.

5. Write short explanatory notes on:—(1) Puteal Libonis. (2) Exsangue cuminum. (3) Cibyratica negotia. (4) Designatorem. (5) Carinas. (6) Sidonio ostro. (7) Aquinatem fucum. (8) Fanum putre Vacunae. (9) Catonem (ext. C). (10) Iarbitam (ib).

6. (*a*) Write down the *Gen. Sing.* and *Plu.* of :—apis, cinis, panis, glans, vulnus, stemma. (*b*) Decline :—quis, unus, neuter, dives, creber excors. (*c*) Give the diminutives of:—corpus, lucrum, canis, catena, lapis, homo.

7. (*a*) Write down the *Pres. Inf.* of the following participles :—nactus, pactus, fatus, satus, ultus, adultus. (*b*) The *Pres. Imperative* of: —sum, eo, loquor, potior. (*c*) The *Perf.* and *Supine* of :—prandeo, spondeo, pendeo, pango, pello, dingo.

8. Show the case and construction used to express the *Agent*, the *Instrument*, and the *Mode*, by rendering into Latin :——(1) This was done by me. (2) This must be done by me. (3) He slew his enemy with his sword. (4) After fighting with the enemy with very great valour he fell covered with wounds.

THIRD YEAR.

LATIN.—JUVENAL.—SATIRES I. AND III.

WEDNESDAY, DECEMBER 12TH :—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate :—

(A) Quis totidem erexit villas, quis fercula septem
Secreto cœnavit avus ? Nunc sportula primo
Limine parva sedet, turbæ rapienda togatæ.
Ille tamen faciem prius inspicit et trepidat, ne
Suppositus venias ac falso nomine poscas.
Agnitus accipies ; jubet a prætore vocari
Ipsos Trojugenas ; nam vexant limen et ipsi
Nobiscum. "Da prætori, da deinde tribuno.
Sed libertinus prior est." "Prior," inquit, "ego adsum :
Cur timeam, dubitemve locum defendere, quamvis
Natus ad Euphraten, molles quod in aure fenestræ
Arguerint, licet ipse negem? sed quinque tabernæ
Quadringenta parant. Quid confert purpura major
Optandum, si Laurenti custodit in agro
Conductas Corvinus oves? ego possideo plus
Pallante et Licinis." Exspectent ergo tribuni ;
Vincant divitiæ, sacro nec cedat honori,
Nuper in hanc urbem pedibus qui venerat albis.

(B) Ingenium velox, audacia perdita, sermo
Promtus et Isæo torrentior. Ede, quid illum
Esse putes? quem vis hominem secum attulit ad nos:
Grammaticus, rhetor, geometres, pictor, aliptes,
Augur, schœnobates, medicus, magus: omnia novit.
Græculus esuriens in cœlum, jusseris, ibit.
Ad summam, non Maurus erat neque Sarmata nec Thrax,
Qui sumsit pennas, mediis sed natus Athenis.
Horum ego non fugiam conchylia? me prior ille
Signabit? fultusque toro meliore recumbet
Advectus Romam, quo pruna et cottana vento?
Usque adeo nihil est, quod nostra infantia cœlum
Hausit Aventini, bacca nutrita Sabina?

(C) Nec tamen hæc tantum metuas; nam qui spoliet te
Non deerit, clausis domibus, postquam omnis ubique
Fixa catenatæ siluit compago tabernæ.
Interdum et ferro subitus grassator agit rem,
Armato quoties tutæ custode tenentur
Et Pomtina palus et Gallinaria pinus.
Sic inde huc omnes tanquam ad vivaria currunt.
Qua fornace graves, qua non incude, catenæ?
Maximus in vinclis ferri modus, ut timeas, ne
Vomer deficiat, ne marræ et sarcula desint.
Felices proavorum atavos, felicia dicas
Secula, quæ quondam sub regibus atque tribunis
Viderunt uno contentam carcere Romam.

2. What different interpretations have been given of the following extt.?—(*a*) Rapturus de nobilitate comesa quod superest. (*b*) Quando major avaritiæ patuit sinus? (*c*) Quinque tabernæ quadringenta parant. (*d*) Verso pollice vulgi quem libet occidunt. (*e*) Transi gymnasia. (*f*) Magnis opibus dormitur.

3. Write explanatory notes on the following allusions:—(1) *Tæda lucebis in illa.* (2) Sumit *trechedipna.* (3) Fert *niceteria.* (4) Non fugiam *conchylia*? (5) Accipit *endromidem.* (6) Facinus *majoris abollæ* (7) *sacro honori.* (8) De *pulvino* surgat *equestri.* (9) Puellæ *sarcinulis* impar. (10) *Uno carcere.*

4. Give the meaning of:—(*a*) A facie jactare manus. (*b*) Claudit latus ingenuorum. (*c*) Cujus res legi non sufficit. (*d*) Opici mures. (*e*) Unius sese dominum fecisse lacertæ. (*f*) In qua proseucha.

5. Give the meaning and derivation of the following words:—aliptes, schœnobates, farrago, cophinus, peculia, viduas, proavorum, atavos, meritoria, bidentis, fercula, grassator.

6. Write short geographical notes on:—(*a*) Gallinaria pinus. (*b*) Præneste. (*c*) Madidam Capenam. (*d*) Prochytam. (*e*) Laurenti in agro. (*f*) Brevibus Gyaris. Give modern names where you can.

7. (*a*) State the difference between:—(1) *et* and *que*. (2) *Aut*, *vel*, and *sive*. (3) *Ne* and *ut non*. (4) Vereor *ne* and vereor *ut*. (5) *Ut* proditor and *tamquam* proditor. (*b*) Define, with examples, *Deponent*, *Inceptive*, *Desiderative*, and *Frequentative* Verbs.

8. A short account of the Roman Satirists.

MATHEMATICS AND NATURAL PHILOSOPHY.

FIRST YEAR.

EUCLID—ARITHMETIC.

THURSDAY, DEC. 13TH:—MORNING, 9 TO 12.

Examiners,..... ..... { ALEXANDER JOHNSON, LL.D.
ARCHIBALD DUFF, M.A.

1. Angles in the same segment of a circle are equal.

2. Construct a square equal to a given rectilineal figure.

3. Construct an isosceles triangle each of whose base angles shall be double the vertical angle.

4. Find a third proportional to two given right lines.

5. Similar triangles are to one another in the duplicate ratio of their homologous sides.

6. If two triangles have one angle of the one equal to one angle of the other, and the sides about the equal angles proportionals, the triangles shall be equiangular to one another, and shall have those angles equal which are opposite to the homologous sides.

7. The opposite angles of any quadrilateral figure inscribed in a circle are together equal to two right angles.

8. In any right-angled triangle, the square which is described on the side subtending the right angle is equal to the sum of the squares described on the sides which contain the right angle.

9. Reduce $\cdot 0\dot{8}\dot{3}$, $\cdot 0\dot{7}14285$, and $\cdot 123\dot{4}5\dot{6}$ to their equivalent vulgar fractions.

(*a.*) Add these decimals together without thus reducing them.

10. What will a bill of exchange on St. Petersburg for 2560 rubles cost at 2 per cent. discount, the par being 75 cents per ruble; $\frac{7}{8}$ per cent. being charged for brokerage.

11. Extract the cube root of 62712728317, and the square root of the result to four places of decimals.

12. Find the value of

$$(1\tfrac{1}{2} + 3\tfrac{1}{4} - \tfrac{5}{6}) \times (\tfrac{3}{4} \text{ of } \tfrac{5}{6} \text{ of } \cdot 046).$$

13. If the velocity of light be 186,000 miles per second, how long does it take to travel from the Sun to the Earth, assuming the distance to be 91,500,000 miles.

14. The first, second and fourth terms of a proportion are 312, 822, and $221\frac{4}{13}$ respectively; find the third term.

SECOND YEAR.

EUCLID—ALGEBRA—TRIGONOMETRY.

THURSDAY, DECEMBER 13TH:—MORNING, 9 TO 1.

Examiners,..... { ALEXANDER JOHNSON, LL.D. / ARCHIBALD DUFF, M.A.

1. About a given circle describe a triangle equiangular to a given triangle.

2. If four right lines be proportional the rectangle under the extremes is equal to the rectangle under the means.

a. The rectangle under the diagonals of a quadrilateral figure inscribed in a circle is equal to the sum of the rectangles under the pairs of opposite sides.

3. If the vertical angle of a triangle be bisected by a straight line which also cuts the base, the segments of the base shall have the same ratio which the sides of the triangle have to one another; and if the segments of the base have the same ratio which the sides of the triangle have to one another, the straight line drawn from the vertex to the point of section shall bisect the vertical angle.

4. In every triangle, the square on the side subtending an acute angle, is less than the squares on the sides containing that angle, by twice the

rectangle contained by either of these sides, and the straight line intercepted between the perpendicular let fall on it from the opposite angle and the acute angle.

5. Resolve into elementary factors :—

$(3x-2)^2 - (x-3)^2$, $(a+b)^2 - 4b^2$, $(4x+3y)^2 - (3x+4y)^2$.

6. Solve the following :—

(a) $\left\{\begin{array}{l} x(y+7) = y(x+1), \\ 2x+20 = 3y+1. \end{array}\right\}$

(b) $\dfrac{2x+9}{9} + \dfrac{4x-3}{4x+3} = 3 + \dfrac{3x-16}{18}$

(c) $\left\{\begin{array}{l} x+y=6, \\ x^3+y^3=72. \end{array}\right\}$

7. By means of logarithms find the 7th power of 2·71 and the 11th root of the result.

8. Solve the equations :—

(a.) $\dfrac{7x+9}{8} - \dfrac{3x+1}{7} = \dfrac{9x-13}{4} - \dfrac{249-9x}{14}$;

(b.) $\dfrac{12}{5-x} + \dfrac{8}{4-x} = \dfrac{32}{x-2}$.

9. Divide $x^{5m} - y^{5m}$ by $x^m - y^m$.

10. State and prove the rules for the solution of right-angled triangles.

11. The two sides of a triangle are 96 and 130 feet respectively, and the contained angle is 65° 13′ 10″. Calculate the base.

12. Prove :—

(a) $\dfrac{\sin A + \sin B}{\sin A - \sin B} = \dfrac{\tan \frac{1}{2}(A+B)}{\tan \frac{1}{2}(A-B)}$

(b) $\tan(A+B) = \dfrac{\tan A + \tan B}{1 - \tan A \tan B}$

13. A ship and a steamer leave the same harbour together; the course of the steamer is S. b. W $\frac{1}{4}$ W., and her rate 10½ knots; that of the ship S-E. b. E., and her rate 6 knots; what will be their distance at the endof 2½ hours, and what the bearing of the ship from the steamer?

14. At what distance on the earth's surface should two mountains, 3 miles and 2 miles high respectively, be placed, in order that the summit of each should be just visible from the summit of the other?

15. Given the sides a, b, c of an oblique-angled triangle; construct formulæ for $\cos \frac{1}{2}A$, $\sin \frac{1}{2}A$, and $\tan \frac{1}{2}A$.

THIRD YEAR.

MECHANICS.

TUESDAY, DECEMBER 11TH:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. If two forces meet at a point, the algebraic sum of their moments, with respect to any point in the plane of the forces, is eqnal to the moment of their resultant.

2. Two forces, equal respectively to 74 lbs. and 123 lbs., act at an angle of 65°. Find the angles into which their Resultant divides this angle.

3. State the principle on which depends the fact that the weight of a body is equal to the sum of the weights of all its parts.

4. State and explain the law of Universal Gravitation. What is the nature of the proof of it? Show that the resultant attraction of a sphere on an external point will pass through the centre of the sphere.

5. Describe the Danish Balance and the mode of graduating it.

6. Find the ratio which the Power at the end of the lever bears to the Pressure perpendicular to the thread of the Screw.

7. A ship sails E. N. E. at the rate of 5 miles per hour, and is drifted by the tide E. by S. at the rate of 3 miles per hour. Find her real motion in magnitude and direction.

8. State the principle of "constancy of work done," and the condition under which it is applicable to any case. In what other form is it expressed? Apply it to the case of the Burton system of pulleys (first kind).

9. Define a "constant force," and deduce the equations

$$v = ft\,;\ s = \tfrac{1}{2}\,vt.$$

10. Find the space described by a falling body between the third and eleventh seconds.

11. Assuming the shape of the Earth to be spherical, calculate the component of centrifugal force at a given place which would tend to move the materials of the earth's crust to the equator.

12. If a pendulum be increased in length by a change of temperature, find the increase in the time of its vibration, and thence show that the

$$\text{Error in a day} = 43200\ \frac{l' - l}{l}\ \text{seconds.}$$

FOURTH YEAR.

MECHANICS—HYDROSTATICS—OPTICS—ASTRONOMY.

TUESDAY, DECEMBER 11TH:—MORNING, 9 TO 1.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. If a heavy particle be projected in a vacuum with a velocity V in a direction making an angle e with the horizontal plane, prove that the velocity v at any time t is given by the equation

$$v^2 = V^2 - 2\ V\ gt\ sin\ e + g^2\ t^2.$$

2. Explain the method of proving that the centrifugal force at the equator = .11126 ft. per second, and assuming that the actual force of gravity at the equator is 32·088 ft., prove that the force of the earth's attraction is 289 times the centrifugal force there.

3. If a circle be drawn in a vertical plane and chords drawn from its highest point, the time occupied by a body in running down any chord is constant.

4. Prove that if a body be kept in equilibrium on an inclined plane by a force making any angle with the plane, the Power is to the Resistance as the sine of the inclination to the sine of the angle made by the Power with the perpendicular to the plane.

5. Calculate the effective pressure per square inch on a safety valve, produced by a weight of 28 lbs. placed on the lever at a distance of 9 inches from the valve, the distance of the valve from the fulcrum being 3 inches and the diameter of the valve $2\frac{1}{2}$ inches, the barometer standing at 29 inches, and the sp. gr. of mercury being 13·596.

6. Describe the Suction and Lifting Pump.

7. If Hiero's crown weighed 15 oz. and was alloyed with silver (sp. gr. = 10.51), calculate the quantity of gold (sp. gr. = 19·35) contained in it, the specific gravity of the crown being 14·479.

8. Describe the Gregorian Telescope, and find its magnifying power.

9. An object placed at a great distance in front of a concave mirror is moved in up to the mirror; trace the change of position of its image, proving your statements.

10. Find the deviation of a ray of light passing nearly perpendicularly through a thin prism, and state any case in which the formula is applied.

11. Distinguish between Synodic and Periodic time for the Moon, and calculate approximately the difference between the two.

12. Find the angle subtended at the earth by a section of her shadow made at the distance of the moon, and explain the use of this angle in ascertaining the circumstances of a Lunar Eclipse. State generally the conditions for a Total Eclipse. What effect has the Earth's motion in her orbit on the duration of an Eclipse?

13. Investigate a method for finding the ratio of the mass of Jupiter to the mass of the Sun. Previous to the recent discoveries, how was the mass of Mars calculated?

14. Prove that the altitude of the pole at any place is equal to the latitude of the place. How is this applied to the measurement of the latitude?

15. State and explain the effect of refraction on the altitude of a star. Prove that the amount varies as the tangent of the Zenith distance, within certain limits.

16. Assuming the mean value of the greatest elongation of Venus to be 45° 30′ and the distance of the earth from the sun to be 91½ millions of miles, calculate the distance of Venus from the Sun.

THIRD AND FOURTH YEARS.

EXPERIMENTAL PHYSICS—HEAT.

TUESDAY, DEC. 11TH:—AFTERNOON, 3 TO 5.

Examiner, ... ALEXANDER JOHNSON LL.D.

1. Describe the principle of Breguet's metallic thermometer.

2. Calculate the temperature which is indicated by the same number on Centigrade and Fahrenheit scales.

3. Define the co-efficient of linear expansion, and if it be .000012204 for 1° C., calculate the increase of length in a mile of iron rails at—20° Fah. when the temp. rises to 100° Fah.

4. Describe an experiment showing the expansion and contraction of water with a change of temperature. Trace the changes of volume which it undergoes in sinking from 60° Fah. to 32° Fah., and explain them. What is the temperature C. and Fah. of the maximum density of water?

5. Define the co-efficient of *absolute* expansion of mercury, and describe the method by which it is ascertained.

6. State the laws of fusion and of solidification.

7. Describe Mason's hygrometer and explain its action.

8. When water is boiled in a glass vessel the temperature is not the same as when boiled in a metallic vessel. Explain this.

ENGLISH AND RHETORIC.

FIRST YEAR.

ENGLISH LANGUAGE.

FRIDAY, DECEMBER 14TH :—MORNING, 9 TO 12.

Examiner,.....REV. ARCHDEACON LEACH, D.C.L.

1. Which are the three different ways in which individual words may be viewed ?

2. Give examples of nouns that are not inflected, (1) for case (2) for number (3) for gender.

3. Give the classification of nouns.

4. What reasons are given for the use of " that" instead of " which" and "who" in the restrictive sense ?

5. Which are the adjectives that are said to be "used in predication alone?"

6. Give the meaning of the indefinite numeral adjectives "many" "any," "some," several," " few," " all," " no" and "none."

7. Give some examples of the adjectives denominated " proper adjectives."

8. Why is the classification of verbs founded on meaning rejected.?

9. Give the subsitance of the remarks on the subject of prepositions phrases and nouns being limited or modified by adverbs.

10. Give some examples of the equivalents of the adverb in composition ;—2 of adjectives used as adverbs.

11. Of the following conjunctions mention those that belong to the class of the subordinating ;—" and," " for" " but," " also," "since," " else," "as," " either-or," " because," " hence," " that." "so-that," " still," " when," "until," " lest," " so-as," " if," " then."

12. Give examples of the following tenses, in the active voice ;—present indefinite, imperfect, perfect—past indefinite, imperfect, perfect—future indefinite, imperfect, perfect.

13. Give a grammatical analysis of the follower passage.—" They who in true virtue strong the third purgation can endure, to Saturn's blissful seat remove, where fragrant breezes purge the blest island and fan the bosom of the plain whose fertile soil bears flowers of golden hue that blow on the borders of the parent stream."

THIRD YEAR.

RHETORIC.

FRIDAY, DECEMBER 14TH :—AFTERNOON, 2 TO 5.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Give a brief sketch of the history of Rhetoric.

2. Give the Substance of the remarks on the Institutes of Quintilian.

3. How do you account for the remarkable ardour with which the Greeks cultivated Rhetoric?

4. Explain the principal points of difference between ancient and modern eloquence, and show that modern times present conditions favorable to the highest kinds of eloquence.

5. Mention and explain the different kinds of Arguments, as given in the table.

6. What is said to be the decisive test for the distinguishing of a priori and a posteriori arguments?

7. (*a*) What objections lie against that division of arguments? (*b*) Give an example of each kind.

8. Explain the ambiguity that arises from the confounding of Logical Sequence and Physical Sequence.

9. How are the terms "Cause" and "Condition" distinguished?

10. Give the substance of the remarks on the subject of Concurrent Testimony.

11. Explain and illustrate the argument from Progressive Approach.

12. State in the terms given the Analysis of the argument from Sign.

13. (*a*) Why are the arguments designated "Example," "Induction," Experience," "Analogy," &c., put in the same class? (*b*) And what is said to be universally assumed in arguments of this class?

14. Explain and illustrate the errors that are said to be very common in the argument from Analogy.

15. Show the importance in argumentation of deciding as to the "onus probandi."

FOURTH YEAR.

ENGLISH LITERATURE.

FRIDAY, DECEMBER 14TH:—MORNING, 9 to 12.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Describe the institutions and practices of the Church that are believed to have materially influenced literature and civilization during the early periods of English history.

2. How did it happen that the Latin language was so generally employed as the means of instruction in early times?

3. Give an account of the life and works of Alcuin and enumerate the rest of the Latin writers of note in Anglo-Saxon times.

4. What effects in regard to the civilization of the British people are inferred by Sir Edward Creasy, from the Roman occupation of Britain?

5. Mention the circumstances, in regard to the history of a literature, that give particular interest to the history of Ireland in early times.

6. What causes may be assigned for the smallness of the number of Celtic productions that have reached modern times?

7. Upon what grounds were the poems of Ossian condemned as imposture?

8. Mention some of the chief points of evidence for the existence of Christianity in Britain before the mission of St. Augustine.

9. How did it happen that so much of the early fictitious literature of the Norman French came to be connected with events of English history?

10. Which are the historical epochs that are given in proof of the relation of important political changes and extraordinary literary activity?

11. How do you account for the frequency of omissions and interpolations found in old manuscripts?

12. Give some account of the Gleeman's song and of the Battle of Finnesburg.

13. Explain the qualities of unity and naturalness in composition.

14. What objections lie against literary productions in the form of Allegory?

MENTAL AND MORAL PHILOSOPHY.

SECOND YEAR.

ELEMENTARY PSYCHOLOGY.

MONDAY, 17TH DECEMBER:—MORNING, 9 to 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Explain the origin and the meaning of the term Psychology.

2. (*a*) Explain the distinction between Subject and Object, as understood in Psychology. (*b*) Mention some other terms used to express the same distinction.

3. (*a*) Define what is meant by a Sense. (*b*) Explain the classification of the Senses.

4. What are (*a*) the organ of Smell, (*b*) the bodies which act on it, (*c*) its sensations, both pure and mixed?

5. Distinguish the different sensations of Hearing.

6. Define Presentation, Representation, Association, Suggestion.

7. State the Primary Laws of Suggestion.

8. Show that Suggestion by Local Association is due to the combined operation of these laws.

9. Name the Secondary Laws of Suggestion.

10. Local Association is the readiest link of Suggestion. (*a*) Explain the reason of this fact; and (*b*) state some of its uses.

11. Explain the difficulty of repeating the alphabet backwards.

12. State and illustrate the Law of Irresistible and Instantaneous Suggestion.

THIRD YEAR.

MORAL PHILOSOPHY.

MONDAY, 17TH DECEMBER:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Explain the origin and the meaning of the terms Ethics and Morals.

2. Distinguish the sphere of Ethics from that of Politics.

3. Distinguish the two departments of Ethics.

4. Distinguish Sensations and Emotions.

5. State the various theories on the origin of the Emotions.

6. Explain the extent to which the Motive Power of a feeling depends on its Intensity.

7. What other characteristics, besides Intensity, require to be considered in estimating the Motive Power of feelings?

8. Distinguish positive or absolute from negative or relative Pleasure and Pain.

9. Distinguish the pains of excessive from those of defective activity.

10. (*a*) Define Appetites. (*b*) Distinguish the Natural from the Artificial or Acquired Appetites.

11. (*a*) Describe the two-fold effect produced on the mind by the pleasures and the pains of others. (*b*) Show that this affords the basis of two species of Affection.

12. Distinguish two species of Benevolent Affection.

13. Distinguish two species of Resentment.

14. (*a*) Explain the nature of Moral Action, so far as philosophers are agreed. (*b*) State the antagonistic theories with reference to the point on which they differ.

FOURTH YEAR.

MENTAL PHILOSOPHY.

MONDAY, 17TH DECEMBER:—AFTERNOON, 2 TO 5.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Explain (*a*) the etymological meaning, (*b*) the Socratic application, (*c*) the present use of the term Philosophy.

2. Explain (*a*) the relation in which Philosophy stands to the Special Sciences, (*b*) the two questions in which the general problem of Philosophy may be summed up.

3. Explain (*a*) the earlier meaning, (*b*) the present limitation, of the term Perception.

4. Show that even an apparently simple cognition, like the perception of the taste of an apple, involves the association of various elements, and comparison of the elements associated.

5. Point out, in reference to the senses of Taste and Smell respectively the difference between man and the brute, between civilized man and the savage.

6. Is there any absolute Magnitude perceived by Touch? Explain your answer.

7. Describe the extension of the sense of Touch, on which the higher achievements of mechanical skill depend.

8. Explain those perceptions of Hearing which involve a reference to space.

9. (*a*) Distinguish the three sources from which the effect of Harmony is derived. (*b*) Explain the affinity between the perception of Harmony and that of Quality in Sound.

10. (*a*) Prove that the Visual Perception of Cubical Extension is acquired. (*b*) Explain the process of its acquisition.

MODERN LANGUAGES AND HEBREW.

FIRST YEAR.

FRENCH.

MONDAY, DEC. 17:—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, M.A., B.C.L.

1. How many accents are there in French? On what letters are they respectively placed? Explain their use. Give examples.

2. What are the different forms of the French feminine articles, *definite indefinite and partitive*? Give examples.

3. Write in French both numbers of *boats, fires, sideboards, halters, treats, leases, grandfathers, heavens.* Give the rules to form the plural of those nouns.

4. Translate and write both genders of *old, mild, a sinner, infirm, dry, twin, hunter, ready, emperor, soft, good, large.* Point out those which form their feminine according to rules.

5. Give the rule to write the three forms of the word *mille.* When do you use them? Give examples.

6. When is *ce* an adjective, and when is it a pronoun? What is its plural? Give examples

7. What is the gender and number of *dont?* For what words is it used? Where should it be placed in the sentence? Give examples.

8. What do you call *primitive* and *derivative* tenses? Are the *Infinitive* the *Participle past*, and *Conditional present* primitive or derivative? If *primitive*, what tenses do they form? if *derivative*, from what tenses are they formed and how?

9. Where do you place the subject in interrogative sentences, when the subject is a noun, and the verb a compound tense? Give two examples.

10. Write in full the *Preterite definite*, *Preterite anterior*, of *ne pas y avoir*, *être*, *finir*, *se promener*, (negative and interrogative forms).

11. Translate into French :

I alighted at the Hotel de France. Make haste, I wait for you. Do not spread that bad news. They quarrelled with everybody. They met several times in the street. There would be more happiness if every one knew how to moderate his desires. It is not necessary to be a conjurer to guess his motives. I was waiting for the steam-boat. You ought to behave differently. That bad news will have cooled his ardour. We admire the beauty of that landscape. Whatever your talents may be, you will not succeed without application.

That house is beautifully finished ; from the roof to the cellar it is in fine order; the wainscot partitions, ceilings, staircase, basement, entrance hall, the floors of the different storeys, all is well done.

La mort et le bucheron.

Un pauvre bûcheron tout couvert de ramée,
Sous le faix d'un fagot aussi bien que des ans,
Gémissant et courbé; marchait à pas pesants,
Et tâchait de gagner sa chaumine enfumée.
Enfin n'en pouvant plus d'effort et de douleur,
Il met bas son fagot, il songe à son malheur ;
Quel plaisir a-t-il eu depuis qu'il est au monde?
En est-il un plus pauvre en la machine ronde ?
Point de pain quelquefois, et jamais de repos :
Sa femme, ses enfants, les soldats, les impôts,
Le créancier et la corvée
Lui font d'un malheureux la peinture achevée,
Il appelle la mort. Elle vient sans tarder,
Lui demande ce qu'il faut faire.
C'est dit-il afin de m'aider
A recharger ce bois, tu ne tarderas guère.

LAFONTAINE.

SECOND YEAR.

FRENCH

TUESDAY, DECEMBER 20:—MORNING, 9 TO 12.

Examiner.....P. J. DAREY, M. A., B.C.L.

Translate into English :—

1. *Chrysale.* Vous êtes satisfaite, et la voilà partie ;
Mais je n'approuve pas une telle sortie (*a*) :
C'est une fille propre aux choses qu'elle fait,
Et vous me (*b*) la chassez pour un bien maigre (*c*) sujet.

Philaminte. Vous voulez que toujours je l'aie à mon service,
Pour mettre incessamment mon oreille au supplice,
Pour rompre toute loi d'usage et de raison
Par un barbare amas de vices d'oraison, (*d*)
De mots estropiés (*e*) cousus (*f*) par intervalles,
De proverbes traînés dans les ruisseaux des halles ?

Bélise. Il est vrai que l'on sue à souffrir ses discours,
Elle y met Vaugelas en pièces tous les jours ;
Et les moindres défauts de ce grossier génie (*g*)
Sont ou le pléonasme ou la cacophonie.

Chrysale. Qu'importe qu'elle manque aux lois de Vaugelas,
Pourvu qu'à la cuisine elle ne manque pas.

MOLIÈRE, *les Femmes savantes*, A. II, sc. VII

2. *a* What would be the more proper and common expression ?
b. How do you explain that *me* ?
c What is the usual meaning of *maigre* ? What does it mean here ?
d, *e*, *f*, *g* answer to the same questions as the above for *oraison*, *estropiés*, *cousus* and *génie*.

3. What is the best character in the *Femmes savantes?* Give your reasons.

4. What is the *dénouement* of that comedy ?

5. How do you express adjectives of dimension in French? Give three examples.

6. Correct the sentence : *Nous étions deux qui étaient du même avis.* Give the reason for your correction.

7. When a *collective noun* is followed by the preposition *de* and a noun, how does the verb agree ? Give two examples.

8. Give two cases when you have to use the *Pluperfect of the Subjunctive* mood.

9. How do you write the participle followed by the infinitive? As an illustration write correctly :

Belles fleurs je vous ai *vu* planter, et je vous ai *vu* fleurir.

10. What prepositions do you use in French to indicate the place you go to—when it is a country—a province—a town—a private house? Give four examples.

11. Translate by the equivalents: *Make hay when the sun shines. A miss is as good as a mile. Practice makes perfect. Still water runs deep. Penny wise and pound foolish. Ce sont deux têtes dans le même bonnet. Tout nouveau tout beau. Chacun son métier. Il est né coiffé. Rira bien qui rira le dernier.*

12. Translate into French :—

Aménophis conceived the design of making his son a conqueror. He set about after the manner of the Egyptians, that is, with great ideas. All children who were born on the same day as Sesostris were brought to court by order of the king: he had them educated as his own children and with the same care as Sesostris. When he was grown up, he made him serve his apprenticeship in a war against the Arabs. This young prince learned there to bear hunger and thirst, and subdued that nation till then invincible. He afterwards attacked Libya, and conquered it.

THIRD YEAR.

FRENCH.

THURSDAY, DECEMBER, 20 :—MORNING, 9 TO 12.

Examiner.....P. J. DAREY, M.A., B.C.L.

1. Translate into English :

Le gazouillement des moineaux m'appelle. Ils réclament les miettes que je sème pour eux chaque matin, j'ouvre ma fenêtre, et la perspective des toits m'apparaît dans toute sa splendeur.—Celui qui n'a habité que les premiers étages ne soupçonne point la variété pittoresque d'un pareil horizon. Il n'a point contemplé cet entrelacement de sommets que la tuile colore ; il n'a point suivi du regard ces vallées de goutières où ondulent les frais jardins de la mansarde, ces grandes ombres que le soir étend sur les pentes ardoisées, et ce scintillement des vitrages qu'incendie le soleil couchant. Il n'a point étudié la flore de ces Alpes civilisées que tapissent les lichens et les mousses ; il ne connaît point les mille habitants qui le peuplent depuis l'insecte microscopique jusqu'au chat domestique, ce renard des toits, toujours en quête ou à l'affut ; il n'a point assisté enfin à ces mille effets de lumières, qui font de ces hautes régions un théâtre aux décorations toujours changeantes ! Que de fois mes jours de repos se sont écoulés à contempler ce merveilleux spectacle, à en découvrir les épisodes

sombres ou charmants, à chercher, enfin, dans ce monde inconnu, *les impressions de vogage* que les touristes opulents cherchent plus bas !

E. Souvestre, *un philosophe sous les toits.*

2. Give a short biographical sketch of *Lafontaine*, *Bossuet*, *Saurin* and *Descartes*.

In what kind of literature did each one of those writers make himself famous?

Name their chief works with a short appreciation of them.

3. Translate into French :

Among the artists that had been allured into the happy valley, to labour for the accommodation and pleasure of its inhabitants, was a man eminent for his knowledge of the mechanic powers, who had contrived many engines both of use and recreation. By a wheel which the stream turned, he forced the water into a tower, whence it was distributed to all the apartments of the palace. He erected a pavilion in the garden, around which he kept the air always cool by artificial showers. One of the groves appropriated to ladies was ventilated by fans, to which the rivulet that ran through it gave a constant motion; and instruments of soft music were placed at proper distances, of which some played by the impulse of the wind, and some by the power of the stream.

Johnson, *Rasselas.*

JUNIOR CLASS.

GERMAN.

Thursday, December 20th:—Afternoon, 2 to 5.

Examiner,.....C. F. A. Markgraf, M.A.

1. Translate into English:—

(A) Die Ziegen.

Die Ziegen baten den Zeus, auch ihnen Hörner zu geben; denn Anfangs hatten die Ziegen keine Hörner.

„Ueberlegt es wohl, was ihr bittet," sagte Zeus. „Es ist mit dem Geschenke der Hörner ein anderes unzertrennlich verbunden, das euch so angenehm nicht sein möchte."

Doch die Ziegen beharrten auf ihrer Bitte, und Zeus sprach: „So habet denn Hörner."

Und die Ziegen bekamen Hörner—und Bart! Denn Anfangs hatten die Ziegen auch keinen Bart. O wie schmerzte sie der häßliche Bart! Weit mehr als sie die stolzen Hörner freuten!

Lessing.

(B) „Aller guten Dinge sind drei," dachte der Wolf, und kam zu einem dritten Schäfer.

„Es geht mir recht nahe," sprach er, „daß ich unter euch Schäfern als das grausamste Thier verschrieen bin. Dir, Montan, will ich jetzt beweisen, wie Unrecht man mir thut. Gib mir jährlich ein Schaf, so soll deine Heerde in jenem Walde, den Niemand unsicher macht als ich, frei und unbeschädigt weiden dürfen. Ein Schaf? Welche Kleinigkeit! Könnte ich großmüthiger, könnte ich uneigennütziger handeln? Du lachst, Schäfer? Worüber lachst du denn?"

„O über nichts. Aber wie alt bist du, guter Freund?" sprach der Schäfer.

„Was geht dich mein Alter an? Immer noch jung genug, dir deine jüngsten Lämmer zu würgen."

„Erzürne dich nicht, alter Isegrimm! Es thut mir leid, daß du mit deinem Vorschlage einige Jahre zu spät kommst. Deine ausgebissenen Zähne verrathen dich. Du spielst den Uneigennützigen, blos um dich desto gemächlicher und mit desto weniger Gefahr nähren zu können."

Fragment from Lessing's „Geschichte des alten Wolfes".

2. (*a.*) What Nouns may take the *plural* ending „er"? (*b.*) What Nouns remain *invariable* in the Plural? (*c.*) In what Nouns *must* the plural ending „e" be accompanied by the softening of the radical vowel? (*d.*) Do any *neuter* Nouns take „en" in the Plural?

3. Give the gender, meaning and Nominative Plural of Gras, Thür, Löwe, Brücke, Wolf, Mann, Freundinn, Bauer, Stuhl, Frau, Wort, Schüssel, Ohr, Volk, Nachbar, Bank, Kuchen, Auge, Nation.

4. Give the Nominatives and Accusatives, Sing. and Plural, of:—The good father, mother, son and daughter; his young nephew and niece; the stronger tree and the weaker shrub; a high stone house (pl. high stone houses).

5. (*a.*) How are diminutives formed in German? State rule, and give examples. (*b.*) Can the adjective „klein" ever be used before diminutives?

6. (*a.*) When will you translate *this* by „dies," and *that* by „das"? (*b.*) When is *what* to be rendered by „was," when by „was für ein," and when by „was für"? (*c.*) When is "some" translated by „ein wenig," and when by „einige"? Explain, adding short examples for *a*, *b*, and *c*.

7. (*a.*) Write down in letters the tenths of the cardinal numbers from *twenty* to *a hundred;* and 16·101, 201·617. (*b.*) Translate:—Four times; the third time; the fifteenth; the forty-third; a second *one*. (*c.*) Is there any difference in meaning between „nicht ein" and „kein"?

8. (*a.*) How are the 1st and 3rd persons Sing., Present Indicative, formed in German verbs? Give examples. State also the verbs which are exceptions to the rule, and give the irregular forms of each. (*b.*) Which persons, and of what tense, are like the Infinitive? Do you know of any exceptions?

9. Give the Perfect Participles of the following verbs:—ausreiten, finden, wiſſen, eſſen, bringen, arbeiten, reiſen, trinken, geben, binden, waſchen.

10. Translate into German:—

This paper is white, and that book is red. Here is a steel pen, and there is good black ink. We have bought a dozen china plates and thirteen ells of black silk. The white lilies are more beautiful than the yellow and the blue *ones*. We must go out this morning, but we will stay at home the whole (ganz) afternoon. The month of April is often colder than the month of March. Do they not hear us? I have been nowhere yet. Does your eldest brother know German? I know those people, but I do not know where they live. Which flowers do you like best? Pray, let me see the picture which you carry. Their friends have just come home.

SENIOR CLASS.

GERMAN.

THURSDAY, DECEMBER 20TH:—AFTERNOON, 2 TO 5.

Examiner,.....C. F. A. MARKGRAF, M.A.

I. Translate into English:—

Doch ſchnell erfriſch' ich ihren Muth;
Sie faſſen ihren Feind mit Wuth,
Indem ich nach des Thieres Lende
Aus ſtarker Fauſt den Speer verſende,
Doch machtlos, wie ein dünner Stab,
Prallt er vom Schuppenpanzer ab.
Und eh' ich meinen Wurf erneuet,
Da bäumet ſich mein Roß und ſcheuet
An ſeinem Baſiliskenblick
Und ſeines Athems gift'gem Wehen,
Und mit Entſetzen ſpringt's zurück,
Und jetzo war's um mich geſchehen.

Da ſchwing' ich mich behend vom Roß
Schnell iſt des Schwertes Schneide bloß;
Doch alle Streiche ſind verloren,

Den Felsenharnisch zu durchbohren
Und wüthend mit des Schweifes Kraft
Hat es zur Erde mich gerafft;
Schon seh' ich seinen Rachen gähnen,
Es haut nach mir mit grimmen Zähnen:
Als meine Hunde, wuthentbrannt,
An seinen Bauch mit grimm'gen Bissen
Sich warfen, daß es heulend stand,
Von ungeheurem Schmerz zerrissen.

Und eh' es ihren Bissen sich
Entwindet, rasch erheb' ich mich,
Erspähe mir des Feindes Blöße,
Und stoße tief ihm ins Gekröse,
Nachbohrend bis ans Heft den Stahl.
Schwarzquellend springt des Blutes Strahl.
Hin sinkt es und begräbt im Falle
Mich mit des Leibes Riesenballe,
Daß schnell die Sinne mir vergehn;
Und als ich neugestärkt erwache,
Seh' ich die Knappen um mich stehn,
Und todt im Blute liegt der Drache."

(Fragment from „Der Kampf mit dem Drachen," by Schiller.)

II. 1. Point out the *irregular* verbs contained in the three stanzas above, and write out the Present Infinitive, the Imperfect, and Perfect Participle (if not already given) of each of them.

2. Doch schnell erfrisch' ich ihren Muth;....da bäumet sich mein Roß.... und mit Entsetzen springt's zurück,.... — Why do the subjects follow their verbs in these sentences? Explain. Do you know of any other instances where the subject is similarly placed?

3. (*a.*) Decline Unser Herr Präsident; die Wiener Zeitung. (*b*) When do Proper Names of persons remain *unchanged?* (*c*) Mention *eight* Proper Names which cannot be used without the article.

4. (*a*) Conjugate „sich betragen," giving the 3rd Sing. and 2nd Plural of all modes and tenses. (*b*) Write down the 2nd Sing. and 1st Plural, Indicative *passive*, of all tenses of „anhalten".

5. (*a*) Give the Imperative, all persons, of treffen, wissen, nachdenken, sein. (*b*) Mention some verbs which are *impersonal* in German, and *not* in English. (*c*) What irregular verbs form their Imperfect Subjunctive *regularly* from the *Infinitive?*

6. (*a*) What prepositions may precede or follow the case they govern? (*b*) What prepositions always follow the case they govern? (*c*) What prepositions are often joined to personal pronouns?

III. Translate into German:—

Many ranges of mountains are covered with great forests. It is our duty to help those who cannot help themselves. According to a letter which I (have) received to-day, we *may* (can) expect our relations within a few days. We did not know (Imperf.) where he came from, nor whither he wished to go. They went up. *Did* (has) he come up? The soldiers in former times plundered and destroyed almost all the towns and villages through which they *passed* (came). I should not do that, if I were in your place. Meet me outside the gate. That every one experiences *both* good and bad, is true. Your servant thought you had gone out; but I believed he was mistaken. While the new house was being built, the family lived at a friend's house in the neighbourhood.

IV. Literature.—

1. Name the Low-German dialects contemporaneous with the Old High German during the Frankish period.

2. What is the substance of the „Heldenbuch"? When, and by whom, was it written?

3. Describe the peculiar character of the Suabian age. Name also some of the most celebrated Minnesänger.

4. What influence did the Reformation by Luther exert on the history of the German language? Give a brief sketch of the life of Luther, and state what you know of the character of his writings.

JUNIOR CLASS.

HEBREW.

FRIDAY, DECEMBER 14TH:—MORNING, 9 TO 12.

Examiner,.....REV. A. DE SOLA, LL.D.

1. Give the rules for the Definite Article; the changes which take place in its vowels on account of the gutturals; and show in what it differs from the vocative and interrogative ה.

2. Show when *Sheva* is syllabical; when quiescent; give examples.

3. Explain, with examples, *Dagesh Lene* and *Dagesh Forte;* show the peculiarity of gutturals with reference to *Dagesh*, and as regards compensation.

4. What are the rules respecting adjectives, their position as affecting the meaning of a sentence, agreement with nouns, &c.? Give examples.

5. How are long and short *Kamets* distinguishable? How long and short *Chirik?* and show more particularly how *Dagesh* forte affects *Kamets*, and simple and compound syllables.

6. Explain *Metheg* and *Makkaph*, and show their effect on syllabication and the accent.

7. Write a brief sketch of the *Massorah*, showing its origin, its composition and its uses.

8. What have you to say as to the origin of the Hebrew language, its claims as the primitive language of mankind, its general characteristics, but especially as regards its vowel system, the antiquity of the latter, the nature of its roots, and such other points as were referred to in Introductory Lectnres.

9. What is to be observed as regards accent?

10. Explain *Mappik* and *Patach* furtive.

11. Translate into Hebrew:—

The large horse and the small mare were in the great city. The good man, the good woman and their little child (masc.) were in the house The word of the king to the men of the city. From day to day. From the good queen to the girl. From the great man to the little boy.

12. Translate into English:—

מן הבית אל העיר · הילדה הטובת · טובה הילדה · הארץ הטובה · האיש הגדול בבית והאשה הטובה בעיר · אל נינוה העיר הגדולה · הילדה הקטנה · הילד והילדה בבית ובעיר טוב האיש וטובה האשה · הסוס והסוסה גדולים ·

SENIOR CLASS.

HEBREW.

FRIDAY, DECEMBER 14TH:—MORNING, 9 TO 12.

Examiner, ...REV. A, DE SOLA, LL.D.

1. Conjugate the verb זכר in the preterite tense, and part. act. of the *kal* form.

2. Explain ו conversive and consecutive, and show its punctuation before the preterite and future.

3. Show how cases of nouns are indicated, and give examples of the

prepositions in their absolute and fragmentary forms, prefixed to nouns with and without the definite article.

4. How do you form the fem. sing. and pl.; the plural absolute and construct, masc. and fem.; and the dual of nouns?

5. State the principles which govern the formation of the construct cases of masculine nouns; and show how the many paradigms in Gesenius may be reduced, according to these principles, into two chief classes.

6. Give the rules for adjectives in connection with nouns; show their relative positions, and give examples.

7. Show, by examples, how contractions are formed when certain prepositions are prefixed to nouns in their fragmentary form, and when, in a doubly contracted form, these fragments are prefixed with the definite article to a noun.

8. Decline a masc. noun with an adjective and define art. e. g. הבית הגדול.

9. Write out the fragmentary forms of the pronouns, and attach them to a noun in the sing. and pl. numbers.

10. Conjugate the verb למד in the future tense, and Imperative mood *kal* form.

11. Translate into Hebrew:—

I dwell in the land of my fathers. This youth is seventeen years old, that girl is seven years-old. Did he bring (Interrog. ה) an evil report of them to me? He was with his brethren tending the flock. He loved his good children.

12. Translate into English:—

את יוסף אהב ישראל כי בן טוב הוא לו · ויהי יוסף בן שבע־עשרה שנה וישנאו אתו אחיו
ולא יכלו דברו לשלם ואביו הזקן אהבו ועשה לו כתנת פסים כי בן זקנים הוא לו:

CHEMISTRY AND NATURAL SCIENCES.

FIRST YEAR IN ARTS AND IN THE DEPARTMENT OF PRACTICAL AND APPLIED SCIENCE.

ELEMENTARY CHEMISTRY.

WEDNESDAY, DECEMBER 19TH:—AFTERNOON, 2 TO 5.

Examiner, ... B. J. HARRINGTON, B.A., Ph.D.

1. State the law of gaseous diffusion.

a. What is the rate of diffusion of Carbonic Oxide as compared with Oxygen?

2. How much Hydrogen can be obtained by decomposing water with 5 grammes of Sodium?

3. Give fully the properties of Carbonic Dioxide.

4. How is Oxygen prepared, and what are its properties?

5. What are the names of the compounds indicated by the following formulæ:—N_2O, H_2O_2, H_3PO_4, $NaHO$, CH_4. Give the properties of the first.

6. Express by an equation the change which takes place when Sal-Ammoniac and Quicklime are heated together.

7. Describe the preparation of Nitric Acid.

8. Give the general formulæ for the members of the Olefine and Paraffin series.

9. What do you understand by Allotropy and Dimorphism? Give examples of each.

SECOND YEAR.

ELEMENTARY BOTANY.

WEDNESDAY, DECEMBER 19TH :—9 A. M. TO 12.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. Explain the terms Primordial Utricle, Nucleus, Protoplasm, in relation to the structure of the cell.

2. Explain the movement of the Sap in plants.

3. Describe the appearance under the microscope of Chlorophyll, Spiral vessels and the cells of Pith.

4. What are Vascular Structures, as distinguished from Cellular? Give examples.

5. Describe Prosenchymatous Tissue, with examples.

6. Name the Amylaceous and Albuminous substances contained in the cells of plants, and state their relations to the nutrition of the plant.

7. Explain the structure and functions of the Parenchyma and Stomata of the Leaf.

8. Describe the Endogenous and Acrogenous stems.

9. Explain the terms Pentastichous, Pinnate, Internode, Rhizoma, as applied to leaves and stems.

10. Explain the terms Cormophyte, Phaenogamous, Epiphyte, as used in Botany.

THIRD YEAR IN ARTS AND MIDDLE YEAR IN APPLIED SCIENCE.

ELEMENTARY ZOOLOGY.

WEDNESDAY, DECEMBER 19TH :—2 P.M. TO 5.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. Describe Bone and Cartilage, and state their relations.

2. State the different types of nervous system, and give examples of the animals in which they occur.

3. Explain the nature of Respiration, and state the kinds of organs by which it is performed in different groups of animals.

4. Describe the appearance under the microscope of Muscular Fibre, Blood-cells and Intestinal Villi.

5. Define the Primary Divisions of the Animal Kingdom.

6. Describe the structures seen in the higher Rhizopods, with examples.

7. How would you classify the Protozoa ? Give examples of each group.

8. Describe the parts of Actinia, and state how thay are related to the forms of stony corals.

9. How are Actinoids distinguished from Alcyonoids, and Rugosa from Tabulata ?

10 Describe the structures designated by the terms Cilium, Spicule, Nucleus, in the lower animals.

FOURTH YEAR IN ARTS AND SENIOR YEAR IN APPLIED SCIENCE.

MINERALOGY AND LITHOLOGY.

WEDNESDAY, DECEMBER 19TH :—9 A.M. TO 12.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. State the distinctive characters of the following minerals ;—

Chalcedony and Jasper.
Talc and Mica.
Apatite and Pyroxene.

2. Describe the several Feldspars, with their chemical and cystallographic differences and modes of occurrence.

3. Describe Calcite, Barite, Garnet, Andalusite, with their relations to rocks and mineral veins.

4. By what characters can Magnetite, Hematite and Limonite be most easily distinguished?

5. State the composition of the principal ores of Copper.

6. State the crystallization, physical characters and composition of the following minerals:—

Fluorite, Hornblende, Serpentine, Corundum, Pyrolusite.

7. Give a tabular classification of rocks, with examples.

8. What are the constituent minerals of Dolerite, Diorite, Basalt and Syenite.

9. Describe some of the more common Metamorphic rocks.

10. Distinguish Shale and Slate, Conglomerate and Agglomerate or Breccia, Limestone and Dolomite.

11. Explain the production of Sulphur, Graphite and Bitumen.

12. Name the rocks exhibited, and state reasons for so naming them.

DEPARTMENT OF PRACTICAL AND APPLIED SCIENCE.

SCOTT EXHIBITION,

ENGINEERING.—1ST PAPER.

FRIDAY, SEPTEMBER 21ST:—MORNING, 9 TO 12.

Examiner.....HENRY T. BOVEY

1. A metre is 3,281 feet; construct a metric scale.

2. What is meant by the line of collimation in the level?

To adjust for collimation, three stations A, B, and C are chosen so that A B = B C; the level is set up at B and the reading of the staff at A is (*a*) feet, and on the staff at B is (*b*) feet; when the level is put close to A, the reading on the staff at A is (*c*) feet, and on the staff at B (*d*) feet; state what adjustment is to be made, and how you would make it.

3. Describe the method of connecting an underground survey with the survey at the surface, when the only communication is by a single shaft and state to what extent the compass may be used in underground surveying.

4. Give the prismoidal formula; and state in what cases the method of mean areas is to be used in preference.

In calculating the cubical content of a length of a cutting or embankment, shew that the error incurred by assuming the average area to be $(\frac{1}{2})$ the sum of the end areas is twice as great as the error incurred by assuming the middle section to be the average section.

5. What is concrete?

Should the stones used in a mixture of concrete be of a uniform or irregular size? Give reasons for your answer.

Specify the qualities which the several ingredients of a mixture of concrete should possess to ensure the best possible concrete.

What advantages does concrete possess over stone as a material of construction?

6. Compare the relative advantages of egg shaped and circular culvert.

A culvert 1000 ft. long discharges (n) gallons of water per minute, find by how much the discharge would be increased if, for the last 500 feet, a second culvert of the same size were laid by the side of the first, and connected with it so that the water could flow equally well along either.

7. What is the centre of pressure?

Find the centre of pressure of a triangular area subjected at all points to a uniform pressure.

A vertical row of water-tight sheet piling 30 ft. high was driven at one end of a reservoir, and had to support a pressure on one side due to a head of 25 ft. of water; it was found necessary to strengthen this dam by two rows of struts, one above the other. Find at what heights these struts should be fixed, in order that each strut might bear an equal amount of pressure.

8. It is required to prepare a sewerage scheme for a town; upon what considerations would you base your modus operandi?

9. A wall has to be built in a tidal river upon a quicksand; state how you would proceed with such work, and describe in detail the wall from the foundation to the coping, illustrating your answer by whatever sketches you may think necessary.

ENGINEERING.—2ND PAPER.

FRIDAY, SEPTEMBER 21ST:—AFTERNOON, 2 TO 4.30.

Examiner,.....HENRY T. BOVEY.

1. What is meant by a factor of safety?

If P be the crushing weight of concrete per square foot of area, and if f be a factor of safety, find how high it is possible to build a cylindrical column of concrete upon a base whose radius is (r) feet.

How much higher would it be possible to build a cone of concrete on the same base?

2. State the steps necessary to be taken before the letting of a contract, and the commencement of the works of a line of railway:—

I. In the field. II. In the office.

3. The top of a railway cutting is level across, the slopes are 2 to 1, the breadth of the bottom is 25 ft., and the depth of the cutting at the several sections 66 ft. apart is 12, 16, 21, 20, 5 and 2 ft.; find the number of cube yards of earth to be removed.

4. The centre lines of two straight reaches of railway will, if prolonged, intersect in a point whose chainage is 300 ft., and it is required to connect the two reaches by a curve of given degree; shew how to find the chainage of the points from which the curve springs.

Explain also how to set out the curve by the method of off-sets, or by any other method with which you are acquainted.

5. Show how to set out half-breadths on side-long ground.

6. Give a pen and ink sketch of a transverse section of a single line of railway, putting in the sketches all the necessary dimensions.

What materials are used as ballast?

From what kind of timber is it best to make sleepers?

7. Sketch the sections of different forms of rails, and state the advantages peculiar to each.

What is meant by the life of a rail?

8. Explain what is meant by the term "head" in hydraulics.

Calculate the discharge per minute from a pipe 2 ft. in diameter and 2000 feet long under a head of 50 feet, using a co-efficient suitable for a clean iron pipe of that diameter.

9. Define the hydraulic mean depth of a channel, and state a formula or the friction in pipes.

An open channel has a rectangular section (a) ft. broad and (b) feet eep; find the hydraulic mean depth.

Explain why in a circular culvert, having a uniform slope, the greatest velocity of a quantity of water flowing through it is attained when the culvert is not quite full.

SURVEYING AND MENSURATION.

SATURDAY, SEPTEMBER 22ND:—AFTERNOON, 2 TO 4.30.

Examiner,..... C. H. MCLEOD.

1. In a closed survey, of which the following are the field-notes, the last line has been omitted, find its length and direction.

Station.	Bearing.	Distance.
1	N. 52° E.	10.60
2	S. 29 ¾° E.	4.10
3	S. 31 ¾° W.	7.70
4		

2. Describe the application of the permanent adjustments to the Surveyor's transit-theodolite.

3. Describe a method of conducting a traverse survey with the transit in which the needle should always agree with the vernier in its reading.

(*a*) When is this check not practicable?

4. Give an example of a method of keeping the field-notes in "setting out" railroad work.

5. Deduce a formula used in angular levelling for cancelling refraction by means of reciprocal observations.

(*a*) At station A the elevation of B was observed 5° 32′, at B observed depression of A was 8° 40′. The distance between A and B was 16,000 feet. Find the difference in level between A and B.

6. Show, geometrically, how a point is determined by means of bearings taken from it to three fixed points.

7. Angles are taken to a "signal" under which it is impossible to set the instrument. It is therefore set to one side. Show how to reduce the angle thus observed to the true angle at the centre of the signal.

8. The bearing of a line A B is N. 30° E. and of a line B C is S. 60° E. A B is 1,672 feet long and declines at 30°. B C declines at 15° and is 2,000 feet long Find the position of C with respect to A.

9. What part of the theodolite used to set out an arc of a circle on a level plane would require testing for adjustment?

10. Prove that the surfaces of spherical triangles are to each other as their respective spherical excesses.

11. Calculate the volume of a prolate spheroid.

DRAWING.

SATURDAY, SEPTEMBER 22ND :—MORNING, 9 TO 12.

Examiner, ...C. H. McLEOD.

1. Construct the involute of a circle whose radius is ·75 in.

2. Project orthographically, a right hexagonal pyramid which rests upon its base and is penetrated by a right cylinder. The axes of the pyramid and cylinder bisect each other, and that of the cylinder is parallel to the planes of projection. The length of the cylinder is 3 in. and its diameter 1·1 in. The altitude of the pyramid is 3 in. and the length of a side of its base 1·5 in. One edge of the base of the pyramid is parallel to the vertical plane.

(*a*) Show the development of the pyramid so penetrated.

(*b*) Show the section of the figure made by a plane passing through the point where the axes of the pyramid and cylinder meet; the plane being perpendicular to the vertical and at an angle of 10° to the horizontal

(*c*) Show this plane by its trace when the figure is turned on the axis of the pyramid through 10°.

3. Project the model before you isometrically.

4. Project perspectively a block of wood 4 ft. square by 1 ft. high which is surmounted by an octagonal prism of one foot side, whose height is 8 feet and upon which stands a circular block 4 feet in diameter and 1 foot in height. The axes of all three coincide. The object is in the foreground and 3 feet on the left, and one side of the base makes an angle of 30° with the picture plane.

METEOROLOGY.

SATURDAY, NOVEMBER 24TH :—MORNING, 10 TO 12.

Examiner,.....C. H. McLEOD.

1. Explain the construction of the following instruments :
   (*a*) A self-registering maximum thermometer.
   (*b*) A rain gauge.
   (*c*) An anemograph.

2. State several methods of determining, from observation, the mean temperature of a day.

3. How would you ascertain the "dew point" experimentally?

4. Define "relative humidity."

5. State Dalton's theory of the atmosphere.

6. Give a classification of the aurora.

7. How are snow-flakes formed?

8. Describe, in detail, the operation of graduating a thermometer.

9. The temperature of the air is 54·3 degrees and that of the wet-bulb thermometer 49·6, find from Guyot's tables the pressure of the vapour present in the atmosphere.

CHRISTMAS EXAMINATIONS.

JUNIOR YEAR.

SURVEYING.

SATURDAY, DECEMBER 15TH:—MORNING, 9 TO 12.

Examiner,.....C. H. MCLEOD.

1. In the measurement of distances how may an account of the number of chains be best kept? (*a*) When the ground slopes very much in the direction of the line, describe the method of chaining which you would employ; also any special instrument which you would use therein.

2. Place upon the accompanying plan the lines which you deem necessary for a chain survey of the ground which it represents.

3. Describe the construction of the Surveyor's compass.

(*a*) Explain the tests which you would apply to the instrument before using it.

4. In conducting a compass survey where there is local attraction, how would you proceed?

(*a*) How would you check your work?

5. Plot the survey of which the following are the field notes.

Line 5		5.26	$\frac{0.00}{(3)}$
	·36	5.04	
		2.50	Crosses.
	From $\frac{5.47}{(4)}$ to left.	0.26	Crosses.
		0.00	·35 to corner.
Line 4	$\frac{0·26}{(5)}$	5.47	Crosses.
	·33	4.26	
		2.74	Crosses.
		1.72	·20.
	From $\frac{6.00}{(3)}$ to left.	0.00	·00.
Line 3		6.00	$\frac{0.00}{(1)}$
		0.40	Crosses corner.
	From $\frac{360}{(2)}$ to right.	0.00	
Line 2		3.60	$\frac{0.00}{(3)}$
		3.57	·40.
		0.35	Meets corner.
	From $\frac{690}{(1)}$ to right.	0.00	
Line 1		6.90	$\frac{0.00}{(2)}$
		6.70	·30.
		6.27	Crosses.
	·20	5.60	
	·45	3.00	
	·00	0.00	

(*a*). Obtain the area from the plot, by a graphical method.

(*b*) Calculate the area directly from the notes.

6. Draw a diagram of a vernier reading to minutes, when the divisions on the primary scale represent 15 minutes. Set the vernier to mark 37 minutes.

7. Explain an adjustment of the Surveyor's transit, which it is only necessary to apply when the instrument is to be used on *broken ground.*

8. If any right line cut the three sides of a triangle, prove that the product of the three segments whose ends are not contiguous is equal to the product of the three other segments..

(*a*). Apply this to the production of a line past an obstacle.

9. How would you join two stations which are not visible from each other by a straight line?

JUNIOR YEAR.

DRAWING.

TUESDAY, DECEMBER 18TH:—MORNING, 9 TO 12.

Examiner,.....C. H. MCLEOD.

1. Construct geometrically:—

(*a*) A cycloid, the generating circle of which has a radius of one inch.

(*b*) The involute of a circle of one inch radius.

(*c*) A triangle, equal in area to a regular pentagon of one inch side.

(*d*) A square, equal in area to an equilateral triangle of 1·2 inch side.

2. Project orthographically:—

(*a*) A cube of 1·5 in. side, so placed that one face makes an angle of 30° with the horizontal, and one edge which is in the horizontal plane of projection makes an angle of 45° with the vertical.

(*b*) A regular tetrahedron of 2 in. side, when it rests on one face, and an edge of that face is perpendicular to the vertical plane.

3. A plane cuts one edge of the solid, in question 2 (*b*), at a point one inch from the apex, and the two other lateral edges at 1·5 in. from it. Show the true section.

4. Show the development of the lower portion of the solid, in question 3.

SECOND AND THIRD YEARS.

MACHINERY.

FRIDAY, DECEMBER 14TH.—(Time, 3 hours.)

Examiner.....HENRY T. BOVEY.

1. Define the following terms :—

"Primary Pieces," "Secondary Pieces," "Train of Mechanism," "Pitch Point," "Instantaneous Axis," "Tooth," "Wheel," "Pulley,' "Velocity Ratio," "Angular Velocity," "Addendum."

An engine having wheels 6 feet in diameter is proceeding at the rate of 60 miles an hour; what is the angular velocity of the wheels?

2. Define "Line of connection," as applied to mechanism. Shew that if the line of connection passes throught a fixed point the pieces have a constant velocity-ratio.

3. State the general conditions of perfect rolling contact.

4. What relations must exist between the diameters, pitch, and numbers of teeth of a pair of wheels?

It is required to make two pairs of wheels to work on two shafts, whose distance apart is x feet. The wheels are to have the same pitch, and their velocity ratios to be y, z; the driver of the first pair of wheels has n teeth. Find the numbers of teeth in each of the other wheels.

5. A self-acting lathe is adjusted so as to put on 40 cuts to an inch, it is required to reduce this to 20 cuts to an inch by substituting for two wheels, of which the driver has 38 teeth and the follower 46, two other wheels to work on the same shafts. What must be the numbers of teeth in the new wheels, the pitch being the same as before?

6. Under what conditions should belts be used to connect rotating pieces in machinery?

Explain why belts are not used to connect the hands of a clock with each other and with the escapement wheel.

7. State the necessary conditions to be observed in connecting shafts with belts. Explain and illustrate by sketches how two shafts, which neither meet nor are parallel, may be connected by pulleys and a belt;—

1. Without the aid of guide pulleys.

2. With the aid of guide pulleys.

8. What will be the forms of the pitch surfaces of wheels which connect two rotating pieces in the following cases?—

1. When the axes are parallel;

2. When they intersect;

3. When they neither intersect nor are parallel.

9. What are the usual forms for the teeth of wheels? What are meant by the faces and flanks of the teeth? How are the faces formed when the flanks are radial?

10. Name the properties peculiar to involute teeth, and show that the back-lash of involute teeth is variable at will.

11. Find an expression for the total length of a tooth of a wheel whose teeth are formed according to the second solution.

12. Find the lengths for the teeth of a pair of radial flanked toothed wheels, whose diameters are 12 inches and 18 inches respectively, so that two teeth may remain in contact while the smaller wheel turns through $\frac{1}{32}$ of a revolution—approaching and receding contact to be equal.

N.B. The answers to the above questions must be illustrated as much as possible by sketches.

SECOND AND THIRD YEARS.

APPLIED MECHANICS.

SATURDAY, DECEMBER 15TH.—(Time, $2\frac{1}{2}$ hours.)

Examiner,..... HENRY T. BOVEY.

1. To determine the strength of a body we require to know the values of 4 constants; state what these constants are, and discuss their respective properties.

2. What is meant by the elasticity and resilience of a material?

What is the co-efficient of elasticity of the material of a round bar, 1 inch in diameter and 3 feet long, which elongates .012 of an inch under a force of 3 tons?

3. How is "work" measured?

Find the "work" required to produce an extension (e) in a straight bar whose length is (l) and whose transverse section is a; E being the co-efficient of elasticity of the material.

4. State the principal properties of cast iron.

5. How many $\frac{5}{8}$ inch rivets must be used to join two plates 30 inches wide and $\frac{3}{8}$ inch thick, so that the rivets may be as strong as the riveted plates, the ratio of the tenacity of wrought iron to its strength to resist shearing being $\frac{6}{5}$?

6. Explain the character of the strains to which a bar of any material may be subjected, and state the assumptions which are made in the theory of structures with regard to these strains.

7. Explain what are meant by the Bending Moment and Shearing Force on an ideal section of a beam.

A beam is in equilibrium under the action of certain external forces, which are given in magnitude and position, and which act in one plane normal to the length of the beam : —

Shew that the elastic forces developed at any ideal section must be in equilibrium with the Bending Moment and Shearing Force with reference to the same ideal section.

8. A beam 12 feet long is supported at both ends and loaded at two points, 3 feet from each end, with a force of $\frac{1}{2}$ ton ; find the Bending Moment and Shearing Force on the middle section of the beam.

9. Illustrate graphically the Bending Moment and Shearing Force at all points of the beam in the preceding question.

SECOND AND THIRD YEARS.

RAILWAY WORK.

SATURDAY, DECEMBER 15TH.—(Time, 2 hours).

Examiner,.....HENRY T. BOVEY.

1. Describe the method of setting out curves by angles of deflection from a tangent.

Two straight reaches of a railway are inclined at an angle of 120°. The chainage of the point A in which the center lines of these reaches would ntersect is 500, and these reaches are to be connected by a 2° curve. Find the chainage of the points from which the curve springs, and also write down the formula for and calculate the magnitude of the tangential angle.

2. Describe the process of laying out a culvert underneath a railway embankment.

An embankment is situated on side-long ground, whose slope is 1 to 4, and a culvert runs beneath it inclined to the direction of the embankment at an angle of 30°. The slopes of the embankment are 1 to 1, the width of the roadway is 12 feet, and the depth at the center line is 10 feet. Find the length of the culvert, also find the cubical content of the culvert, its internal and external diameters being 18 inches and 27 inches respectively.

3. State the prismoidal formula, and also the formula of mean heights and mean areas.

Shew that the error incurred by employing the method of mean areas is twice as great as the error incurred by employing the method of mean heights.

4. Find the volume of one chain (=100 feet) length of a railway cutting by the prismoidal formula from the following data :—Top level across,

formation width 25 feet, slopes 1½ to 1, height of surface above formation level at the ends 12 and 16 feet respectively.

5. Name the items which make up the cost of the permanent way, and estimate the cost of one mile of such way.

6. Give a complete pen and ink sketch of the cross section of a railway cutting, putting in all necessary dimensions.

MIDDLE YEAR.

(*CIVIL AND MINING ENGINEERNIG.*)

SURVEYING.

MONDAY, DECEMBER 17TH:—MORNING, 9 TO 12.

Examiner, ...C. H. MCLEOD.

1. Describe, in detail, a method of obtaining local time.

2. Describe the adjustment of the transit-theodolite, in so far as is necessary for the measurement of angles of altitude and depression.

3. Draw a diagram of a Vernier scale marking 23 minutes and 50 seconds.

4. Show how an inaccessible straight line may be measured when no point can be found from which the two ends can be seen.

5. Supply the omissions in the following notes:—

Station.	Bearing.	Distance.
1	S. 21° W.	12·40
2	———	5·86
3	N. 12° E.	8·25
4	N. 47° W.	———

6. Show how to divide an irregular polygon into parts having a given ratio to each other, by lines drawn from one of its angles.

7. How are the farm lots in the public lands of Canada designated.

(*a*) Where would the largest lot in a given area of 12 miles square be found?

8. Describe the method of conducting a "running survey."

(*a*) Under what circumstances would such a survey be sufficiently accurate to form a portion of a topographical survey.

9. Give a description of a harbour survey, and explain fully the methods employed.

MIDDLE YEAR.

MENSURATION.

TUESDAY, DECEMBER 18TH:—MORNING, 9 TO 12.

Examiner,.....C. H. MCLEOD

1. Find an expression for the area of a triangle in terms of its sides.

2. The difference between the diagonal and side of a square is d; find the area.

3. The area of a segment of a circle is the product of half the radius by the excess of the arc over half the chord of twice the arc.

4. The area between two concentric circles is 100 square inches, and the radius of the inner circle is 14 inches; find the radius of the larger circle.

5. The area of a triangle on the earth's surface is known to be 1,000 square miles; what is the sum of the angles of the triangle?

6. Find the lateral surface of the frustum of a cone, the top and bottom diameters of which are 5 feet and 8 feet, and the slant height 10 feet.

7. The volume generated by the revolution of any plane surface about an axis in its plane is equal to area of the surface multiplied by the distance through which the centre of gravity of the surface moves.

8. The area included between the axis of a column and the generating templet of its capital is 250 square inches; the perpendicular distance between the centre of gravity of the area and the axis is 6 inches; calculate the volume of the capital.

9. Find the volume of a wedge, the edge of which is 3 inches, the length and breadth of the base 5 inches and 2 inches, and the height 10 inches.

MIDDLE YEAR.

(CIVIL AND MECHANICAL ENGINEERING).

DRAWING.

TUESDAY, DECEMBER 18TH :— AFTERNOON, 2 TO 5.

Examiner, ... C. H. MCLEOD.

1. Two walls of a building meet at an angle of 75°, the top of the one s horizontal and the inclination of the roof is 15° ; find the angle which the top of the other wall makes with the horizontal.

2. Project orthographically :—

(*a*) A plane *ABCD*, which is so placed that the two sides *AB*, *BC*, make respectively angles of 20° and 30° with the horizontal, and *AB* is at an angle of 30° with the vertical plane. $AB = 2.0$, $BC = 1{\cdot}4$, $CD = 2{\cdot}1$, $DA = 1{\cdot}9$, and the angle of *ABC* is 80°.

(*b*) A prism, of which the figure in (*a*) is the base. The edges which meet the extremities of *AB* make angles of 60° with it, and are in the horizontal projecting plane of *AB*.

SESSIONAL EXAMINATIONS, 1878.

CLASSICS.

FIRST YEAR.

GREEK.—HOMER.—ODYSSEY, BOOK XII.

TUESDAY, APRIL 2ND:—MORNING, 9 TO 12.

Examiner, ... REV. GEORGE CORNISH, LL.D

1. Translate:—

(A) Σειρῆνας μὲν πρῶτον ἀφίξεαι, αἵ ῥά τε πάντας
ἀνθρώπους θέλγουσιν, ὅτις σφέας εἰσαφίκηται.
ὅστις ἀϊδρείῃ καὶ πελάσῃ καὶ φθόγγον ἀκούσῃ
Σειρήνων, τῷ δ' οὔτι γυνὴ καὶ νήπια τέκνα
οἰκαδε νοστήσαντι παρίσταται οὐδὲ γάννυται,
ἀλλά τε Σειρῆνες λιγυρῇ θέλγουσιν ἀοιδῇ,
ἥμεναι ἐν λειμῶνι· πολὺς δ' ἀμφ' ὀστεόφιν θὶς
ἀνδρῶν πυθομένων, περὶ δὲ ῥινοὶ μινύθουσιν.
ἀλλὰ παρὲξ ἐλάαν, ἐπὶ δ' οὖατ' ἀλεῖψαι ἑταίρων
κηρὸν δεψήσας μελιηδέα, μή τις ἀκούσῃ
τῶν ἄλλων· ἀτὰρ αὐτὸς ἀκουέμεν αἴ κ' ἐθέλῃσθα,
δησάντων σ' ἐν νηῒ θοῇ χεῖράς τε πόδας τε
ὀρθὸν ἐν ἱστοπέδῃ, ἐκ δ' αὐτοῦ πείρατ' ἀνήφθω,
ὄφρα κε τερπόμενος ὄπ' ἀκούῃς Σειρήνοιιν.
εἰ δὲ λίσσηαι ἑτάρους λῦσαί τε κελεύῃς,
οἱ δὲ σ' ἔτι πλεόνεσσι τόθ' δεσμοῖσι διδέντων.

(B) Ὣς ἐφάμην, οἱ δ' ὦκα ἐμοῖς ἐπέεσσι πίθοντο.
Σκύλλην δ' οὐκέτ' ἐμυθεόμην, ἀπρηκτον ἀνίην,
μή πώς μοι δείσαντες ἀπολλήξειαν ἑταῖροι
εἰρεσίης, ἐντὸς δὲ πυκάζοιεν σφέας αὐτούς.
καὶ τότε δὴ Κίρκης μὲν ἐφημοσύνης ἀλεγεινῆς
λανθανόμην, ἐπεὶ οὔτι μ' ἀνώγει θωρήσσεσθαι·
αὐτὰρ ἐγὼ καταδὺς κλυτὰ τεύχεα καὶ δύο δοῦρε
μάκρ' ἐν χερσὶν ἑλὼν εἰς ἴκρια νηὸς ἔβαινον
πρῴρης· ἔνθεν γάρ μιν ἐδέγμην πρῶτα φανεῖσθαι
Σκύλλην πετραίην, ἣ μοι φέρε πῆμ' ἑτάροισιν.
οὐδέ πη ἀθρῆσαι δυνάμην· ἔκαμον δέ μοι ὄσσε
πάντη παπταίνοντι πρὸς ἠεροειδέα πέτρην.

(C) Ὣς ἔφατ' Εὐρύλοχος, ἐπὶ δ' ἤνεον ἄλλοι ἑταῖροι.
αὐτίκα δ' Ἠελίοιο βοῶν ἐλάσαντες ἀρίστας
ἐγγύθεν· οὐ γὰρ τῆλε νεὸς κνανοπρῷροιο
βοσκέσκονθ' ἑλικες καλαὶ βόες εὐρυμέτωποι·
τὰς δὲ περίστησάν τε καὶ εὐχετόωντο θεοῖσιν,
φύλλα δρεψάμενοι τέρενα δρυὸς ὑψικόμοιο·
οὐ γὰρ ἔχον κρῖ λευκὸν ἐϋσσέλμου ἐπὶ νηός.
αὐτὰρ ἐπεί ῥ' εὔξαντο καὶ ἔσφαξαν καὶ ἔδειραν,
μηρούς τ' ἐξέταμον κατά τε κνίσῃ ἐκάλυψαν
δίπτυχα ποιήσαντες, ἐπ' αὐτῶν δ' ὠμοθέτησαν·
οὐδ' εἶχον μέθυ λεῖψαι ἐπ' αἰθομένοις ἱεροῖσιν,
ἀλλ' ὕδατι σπένδοντες ἐπώπτων ἔγκατα πάντα.
αὐτὰρ ἐπεὶ κατὰ μῆρ' ἐκάη καὶ σπλάγχν' ἐπάσαντο,
μίστυλλόν τ' ἄρα τἆλλα καὶ ἀμφ' ὀβελοῖσιν ἔπειραν.

2. Explain the use of the Moods and Tenses of the following verbs in extt. (A) and (B) :—*ἐλάαν*, *ἀκούσῃ*, *ἐθέλησθα*, *δησάντων*, *ἀπολλήξειαν*, *ἔβαινον*, *φανεῖσθαι*, *εἰσαφίκηται*. (*b*) Show the construction of :—*τῶν ἄλλων*, *χεῖράς τε πόδας*, *εἰρεσίης*, *ἐφημοσύνης*, *μοι παπταίνοντι*. Distinguish between the following usages with the verb *ἀκούω* :—*μυκηθμοῦ τ' ἤκουσα βοῶν οἰῶν τε βληχήν*. Distinguish between *πέρι τοι μένος* and *περί τοι μένος*. (*c*) Give the force of the prepositions in the compounds *ὑπεκ*, *προφύγοιμι* and *ὑπεκφυγέειν*.

3. Parse the following verbs, and give the equivalents in Attic of such as are Epic :—*προσφύς*, *τετευχώς*, *βέβλητο*, *πλῆτο*, *ἀποτέθνασαν*, *νείκεον*, *τῖσαι*, *ἔκταμεν*, *ἀῃ*, *οἰσέμεναι*, *εἶσε*, *προσέλεκτο*.

4. Give as carefully as you can the *derivation* and the *meaning* of the following words :—*ἠριγενείης*, *χοροί*, *ῥηγμῖνι*, *σχέτλιοι*, *ἀσπετα*, *Σειρῆνας*, *Πλαγκτάς*, *Σκύλλη*, *πυκνοί*, *χθαμαλώτερον*.

5. Write short explanatory notes on the meaning of the following: —(1) *ἐπὶ δόρπον*. (2) *ἱστοῦ προτόνους*. (3) *Ἑρμείαο διακτόρου*. (4) *μηροὺς ἐξέταμον*. (5) *ἐκ νυκτῶν ἄνεμοι χαλεποί*. (6) *ἱκμενον οὖρον*. (7) *ἐν ἱστοπέδῃ*. (8) *πρυμνήσια νηός*. (9) *τρίχα νυκτὸς ἔην*.

6. Explain the formation and meaning of the following:—*ὄθι*, *δή*, *ἄρα*, *αὐτάρ*, *τοί*, *ὀστεόφιν*, *κέν*, *ἔνθα*, *ἐνθεν*, *θύραζε*.

7. Parse the following, and write down the *Nom. Sing.* of each :—*δοῦρα*, *ῥινοῖο*, *τρόπιος*, *τέραα*, *ἀργῆτι*, *ῃσιν*, *δρυός*, *εἴδατα*, *ἁλός*, *ῥηγμῖνα*, *σπῆι*, *οὐατα*.

8. (*a*) Define, and illustrate by examples, what is meant by *Tmesis, Anastrophe, Arsis, Thesis.* (*b*) Name the metre of the Odyssey and write down the scale. (*c*) Scan the first three vss. of ext. (A).

9. A short account of the birth-place, life and poetry of Homer.

INTERMEDIATE EXAMINATION.

TUESDAY, APRIL 2ND:—MORNING, 9 TO 12.

GREEK.—ARRIAN.—BOOK III.

Examiners..... { REV. GEORGE CORNISH, LL.D.
REV. GEORGE WEIR, M.A.

1. Translate:—

(A) Ἐκεῖθεν δὲ διαβὰς τὸν πόρον ἦκεν ἐς Μέμφιν· καὶ θύει ἐκεῖ τοῖς τε ἄλλοις θεοῖς καὶ τῷ Ἄπιδι καὶ ἀγῶνα ἐποίησε γυμνικόν τε καὶ μουσικόν· ἦκον δὲ αὐτῷ οἱ ἀμφὶ ταῦτα τεχνῖται ἐκ τῆς Ἑλλάδος οἱ δοκιμώτατοι. ἐκ δὲ Μέμφιος κατέπλει κατὰ τὸν ποταμὸν ὡς ἐπὶ θάλασσαν τούς τε ὑπασπιστὰς ἐπὶ τῶν νεῶν λαβὼν καὶ τοὺς τοξότας καὶ τοὺς Ἀγριᾶνας καὶ τῶν ἱππέων τὴν βασιλικὴν ἴλην τὴν τῶν ἑταίρων. ἐλθὼν δὲ ἐς Κάνωβον καὶ κατὰ τὴν λίμνην τὴν Μαρίαν περιπλεύσας ἀποβαίνει ὅπου νῦν Ἀλεξάνδρεια πόλις ᾤκισται, Ἀλεξάνδρου ἐπώνυμος. καὶ ἔδοξεν αὐτῷ ὁ χῶρος κάλλιστος κτίσαι ἐν αὐτῷ πόλιν καὶ γενέσθαι ἂν εὐδαίμονα τὴν πόλιν. πόθος οὖν λαμβάνει αὐτὸν τοῦ ἔργου, καὶ αὐτὸς τὰ σημεῖα τῇ πόλει ἐθηκεν, ἵνα τε ἀγορὰν ἐν αὐτῇ δείμασθαι ἔδει καὶ ἱερὰ ὅσα καὶ θεῶν ὧν τινων, τῶν μὲν Ἑλληνικῶν, Ἰσιδος δὲ Αἰγυπτίας, καὶ τὸ τεῖχος ᾗ περιβεβλῆσθαι. καὶ ἐπὶ τούτοις ἐθύετο, καὶ τὰ ἱερὰ καλὰ ἐφαίνετο.

(B) Ταῦτα ὡς ἐξηγγέλθη Ἀλεξάνδρῳ πρὸς τῶν κατασκόπων τῶν Περσῶν ὅσοι ἑάλωσαν, ἔμεινεν αὐτοῦ ἵνα ἐξηγγέλθη ἡμέρας τέσσαρας· καὶ τήν τε στρατιὰν ἐκ τῆς ὁδοῦ ἀνέπαυσε, τό τε στρατόπεδον καὶ τάφρῳ τε καὶ χαρακι ἐτείχισεν. ἔγνω γὰρ τὰ μὲν σκευοφόρα ἀπολείπειν καὶ ὅσοι τῶν στρατιωτῶν ἀπόμαχοι ἦσαν, αὐτὸς δὲ ξὺν τοῖς μαχίμοις οὐδὲν ἄλλο ὅτι μὴ ὅπλα φέρουσιν ἰέναι ἐς τὸν ἀγῶνα. ἀναλαβὼν οὖν τὴν δύναμιν νυκτὸς ἦγεν ἀμφὶ δευτέραν φυλακὴν μάλιστα, ὡς ἅμ' ἡμέρᾳ προσμῖξαι τοῖς βαρβαροις. Δαρεῖος δέ, ὡς προσηγγέλθη αὐτῷ προσάγειν ἤδη Ἀλέξανδρος, ἐκτάσσει τὴν στρατιὰν ὡς ἐς μάχην· καὶ Ἀλέξανδρος ἦγεν ὡσαύτως τεταγμένους. καὶ ἀπεῖχε μὲν ἀλλήλων τὰ στρατόπεδα ὅσον ἑξήκοντα σταδίους, οὐ μήν πω καθεώρων ἀλλήλους· γήλοφοι γὰρ ἐν μέσῳ ἐπίπροσθεν ἀμφοῖν ἦσαν.

(C) Βῆσσος δέ, ἔχων ἀμφ' αὐτὸν Περσῶν τε τοὺς μετασχόντας αὐτῷ τῆς Δαρείου συλλήψεως καὶ αὐτῶν Βακτρίων ἐς ἑπτακισχιλίους καὶ Δάας τοὺς ἐπὶ τάδε τοῦ Τανάϊδος ποταμοῦ ἐποικοῦντας, ἐφθειρε τὴν ὑπὸ τῷ ὄρει τῷ Καυκάσῳ, ὡς ἐρημίᾳ τε τῆς χώρας τῆς ἐν μέσῳ αὐτοῦ τε καὶ Ἀλεξάνδρου καὶ ἀπορίᾳ τῶν ἐπιτηδείων ἀπείρξων Ἀλεξανδρον τοῦ μὴ ἐλαύνειν πρόσω. ἀλλ' Ἀλέξανδρος ἤλαυνεν οὐδὲν μεῖον, χαλεπῶς μὲν διά τε χιόνος πολλῆς καὶ ἐνδείᾳ τῶν ἀναγκαίων, ἦει δὲ ὅμως. Βῆσσος δέ, ἐπεὶ ἐξηγγέλλετο αὐτῷ οὐ πόρρω ἤδη ὢν Αλέξανδρος, διαβὰς τὸν Ὦξον ποταμὸν τὰ μὲν πλοῖα ἐφ' ὧν διέβη κατέκαυσεν, αὐτὸς δὲ εἰς Ναύτακα τῆς Σογδιανῆς χώρας ἀπεχώρει. εἵποντο δὲ αὐτῷ οἵ τε ἀμφὶ Σπιταμένην καὶ Ὀξυάρτην, ἔχοντες τοὺς ἐκ τῆς Σογδιανῆς ἱππέας, καὶ Δάαι οἱ ἀπὸ τοῦ Τανάϊδος. οἱ δὲ τῶν Βακτρίων ἱππεῖς, ὡς φεύγειν ἐγνωκότα ἔμαθον Βῆσσον, ἄλλος ἄλλη ἐπὶ τὰ σφῶν ἕκαστοι ἀπηλλάγησαν.

2. Explain carefully the syntax of the following extracts, and point out any peculiarities:—(*a*) ὡς ἀπείρξων Ἀλέξανδρον τοῦ μὴ ἐλαύνειν πρόσω. (*b*) ποταμὸν ὃν ἐχρῆν περᾶσαι ἰόντι ἐπὶ Πέρσας. (*c*) μέσων δὲ νυκτῶν ἑαυτοῦ θερμότατον. (*d*) τῆς ψάμμου ἐπιφόρει κατὰ τῆς ὁδοῦ ἐπὶ μέγα.

3. Parse the following verbs, and give the Present Infinitive of each: —ἐφθη, παρήσειν, ἐγκαταλήφθη, διεκπαῖσαι, κατέσπων, διεξέπεσε, ἀντιπαρῆγον, προτέτακτο, πεπυσμένος, ἐτετάχατο.

4. Give the etymology and meaning of the followiug words:— ἡμιολίαις, ὀχυρότητα, ἀριστερά, ἀβλαβεῖς, ἀνάσπαστοι, ὑπέρογκον, σχεδιασθέν, σφαλερόν, ἀνακωχή, φρενήρει, λεώφορον, πυκνή.

5. Write short explanatory notes on the following:—τετραρχίαν μίαν ἱππικήν. ταῖν θεαῖν ἐν Ἐλευσῖνι. οἱ Πάραλοι. ἐς βάθος τεταγμένοι. ἐπὶ κέρως ἦγε. ἀναπτύξαι ἢ ἐγκλεῖσαι τὴν φάλαγγα. τάφρῳ τε καὶ χάρακι ἐτείχισεν. οἱ μηλοφόροι. τοὺς ἵππους ἔκοπτον. ἐπὶ μετώπου. ἐς ἐπικαμπήν. ἐπὶ δόρυ.

6. Give the exact import of the prepositions in the following ext.: —(*a*) ἐπὶ Σούσων ἐστέλλετο. (*b*) παρέπλει ἐκ Φοινίκης ὡς ἐπ' Αἴγυπτον. ἐκ Δαρείου καθεστηκώς. (*c*) ἀναπλεῖν κατὰ τὸν ποταμόν. (*d*) τοὺς στρατευομένους παρὰ τοῖς βαρβάροις παρὰ τὰ δόγματα τὰ τῶν Ἑλλήνων.

7. Define the geographical position, giving modern names, where you can, of:—Τάναϊς, Μαιῶτις, Μαράκανδα, Ὦξος, Βάκτρα, Καύκασος, Ἀλεξάνδρεια, Δράγγαι, Ἡ ἐρυθρὰ Θάλλασσα, Ἡλιούπολις.

8. (*a*) Define the terms ***stem***, ***root***, ***prefix*** and ***suffix***, giving examples. (*b*) Point out the proper distinction between *cognate* and *derived* words, and mention derivatives in English of στρατός, ἡμέρα, φόβος, χρόνος, μάρτυς. (*c*) Give the cognate forms in Latin and English of ἔζομαι, θιγγάνω, and γιγνώσκω.

9. (*a*) Give a short account of Arrian and his writings. (*b*) What period of time and what events are included in this book? (*c*) Give your estimate of the character of Alexander as a general and statesman.

THIRD YEAR.

GREEK.—AESCHYLUS.—PROMETHEUS VINCTUS.

FRIDAY, APRIL 5TH:—MORNING, 9 TO 12.

Examiner.....REV. GEORGE CORNISH, LL.D

1. Translate:—

(A) ΠΡ. εἰ γάρ μ' ὑπὸ γῆν νέρθεν θ' Ἅιδου
τοῦ νεκροδέγμονος εἰς ἀπέραντον
Τάρταρον ἥκεν,
δεσμοῖς ἀλύτοις ἀγρίοις πελάσας.
ὡς μήτε θεὸς μήτε τις ἄλλος
τοῖσδ' ἐπεγήθει.
νῦν δ' αἰθέριον κίνυγμ' ὁ τάλας
ἐχθροῖς ἐπίχαρτα πέπονθα.

ΧΟ. τίς ὧδε τλησικάρδιος
θεῶν ὅτῳ τάδ' ἐπιχαρῆ;
τίς οὐ ξυνασχαλᾷ κακοῖς
τεοῖσι, δίχα γε Διός; ὁ δ' ἐπικότως ἀεὶ
θέμενος ἀγναμπτον νόον
δάμναται οὐρανίαν
γένναν, οὐδὲ λήξει, πρὶν ἂν ἢ κορέσῃ κέαρ ἢ παλάμᾳ τινὶ
τὰν δυσάλωτον ἕλῃ τις ἀρχάν.

ΠΡ. ἦ μὴν ἔτ' ἐμοῦ, καίπερ κρατεραῖς
ἐν γυιοπέδαις αἰκιζομένου,
χρείαν ἕξει μακάρων πρύτανις,
δεῖξαι τὸ νέον βούλευμ' ὑφ' ὅτου
σκῆπτρον τιμάς τ' ἀποσυλᾶται.
καί μ' οὐτι μελιγλώσσοις πειθοῦς
ἐπαοιδαῖσιν
θέλξει, στερεάς τ' οὔποτ' ἀπειλὰς
πτήξας τόδ' ἐγῶ καταμηνύσω,
πρὶν ἂν ἐξ ἀγρίων δεσμῶν χαλάσῃ.
τοινάς τε τίνειν
τῆσδ' αἰκίας ἐθελήσῃ.

(B) ΩΚ. οἶκουν, Προμηθεῦ, τοῦτο γιγνώσκεις ὅτ
ὀργῆς ζεούσης εἰσὶν ἰατροὶ λόγοι;
ΠΡ. ἐάν τις ἐν καιρῷ γε μαλθάσσῃ κέαρ
καὶ μὴ σφριγῶντα θυμὸν ἰσχναίνῃ βίᾳ.
ΩΚ. ἐν τῷ προμηθεῖσθαι δὲ καὶ τολμᾶν τίνα
ὁρᾷς ἐνοῦσαν ζημίαν; δίδασκέ με.
ΠΡ. μόχθον περισσὸν κουφόνουν τ' εὐηθίαν.
ΩΚ. ἃ μὲ τήνδε τὴν νόσον νοσεῖν, ἐπεὶ
κέρδιστον εὖ φρονοῦντα μὴ δοκεῖν φρονεῖν.
ΠΡ. ἐμὸν δοκήσει τἀμπλάκημ' εἶναι τόδε.
ΩΚ. σαφῶς μ' ἐς οἶκον σὸς λόγος στέλλει πάλιν.
ΠΡ. μὴ γὰρ σε θρῆνος οὑμὸς εἰς ἐχθραν βάλῃ.
ΩΚ. ἢ τῷ νέον θακοῦντι παγκρατεῖς ἕδρας;
ΠΡ. τούτου φυλάσσου μή ποτ' ἀχθεσθῇ κέαρ.
ΩΚ. ἡ σὴ Προμηθεῦ, ξυμφορὰ διδάσκαλος.

(C) εὐθὺς δὲ μορφὴ καὶ φρένες διάστροφοι
ἦσαν, κεραστὶς δ', ὡς ὁρᾶτ', ὀξυστόμῳ
μύωπι χρισθεῖσ' ἐμμανεῖ σκιρτήματι
ἦσσον πρὸς εὐποτόν τε Κερχνείας ῥέος
ἀκτήν τε Λέρνης· βουκόλος δὲ γηγενὴς
ἄκρατος ὀργὴν Ἄργος ὠμάρτει, πυκνοῖς
ὄσσοις δεδορκὼς, τοὺς ἐμοὺς κατὰ στίβους.
ἀπροσδόκητος δ' αὐτὸν ἀφνίδιος μόρος
τοῦ ζῆν ἀπεστέρησεν. οἰστροπλὴξ δ' ἐγὼ
μάστιγι θείᾳ γῆν πρὸ γῆς ἐλαύνομαι.
κλύεις τὰ πραχθέντ'· εἰ δ' ἔχεις εἰπεῖν ὅ τι
λοιπὸν πόνων, σήμαινε· μηδέ μ' οἰκτίσας
ξύνθαλπε μύθοις ψευδέσιν· νόσημα γὰρ
αἴσχιστον εἶναί φημι συνθέτους λόγους.

2. (*a*) Scan the first three vss. of ext. (A), naming the metre and writing down the scheme of it. (*b*) Explain the usage of *εἰ γάρ* and of *ἵνα*, *ὡς*, and *ὅπως*. (*c*) What is the import of the particles *ἤ μήν*? (*d*) In ext. (B) some have read *ψυχῆς* for *ὀργῆς*, and *τῇδε τῇ νόσῳ* for *τ. τ. νόσον*:—distinguish between them severally. (*e*) Show how the episode of Io is connected with the plot of this Drama.

3. Write explanatory notes on:—(1) *τύχαι Ἄτλαντος*. (2) *Τυφῶνα θοῦρον*. (3) *ἰπούμενος*. (4) *ἐκραγήσονται* * * * *γύας*. (5) *μασχαλιστῆρας*. (6) *τὰ μὲν σ' ἐπαινῶ*. (7) *ἀκοιμήτῳ ῥεύματι*. (8) *Σκύθην οἶμον*. (9) *ναρθηκοπλήρωτον*. (10) *ἀπέδιλος*.

4. State as accurately as you can, the meaning, and give the derivation of the following words :—*διατόρους, ἄκικυν, κατεσκέλλοντο, ἰότατι, βάξις, ἐξωμμάτωσα, εὐωνύμους, πέδοι, παράορος, ἁπλάτου, ἀήσυροι, προσείλους.*

5. Explain the syntax of the following :—(*a*) *ἄτερ γνώμης τὸ πᾶν ἔπρασσον.* (*b*) *ἀλλ' ὧν δέδωκ' εὔνοιαν ἐξηγούμενος.* (*c*) *πρὶν ἂν κορέσῃ κέαρ.* (*d*) *μή τι προῦβης τῶνδε.* (*e*) *τούτου φυλάσσου μή ποτ' ἀχθεσθῇ κέαρ.* (*f*) *σφῷν μὲν ἐντολὴ Διὸς ἔχει τέλος.* (*g*) *γῆν πρὸ γῆς.*

6. Parse the following :—*ἧσσον, ἀφῖξαι, πεποιθέναι, ῥαισθῇ, παρεξίασι, προσῆξε, ἐπήρουν, ἐφεῖτο, παρεστώτων, σαφηνιῶ, λέλακε, ἐδωρήσω.*

7. Write out the equivalents of the following forms :—*τἀν, τἄν οὐμός, προὐτεθεσπίκει, κἀν, κἄν, ταὐτοῦ, οὕνεκα.*

8. (*a*) Write down the Attic for the following :—*τύχας, οὐλομένας, τάν, τᾶν, παγαῖς, τᾶς, ἀχω, προσέβα, πωλεύμεναι.* (*b*) Explain the forms and name the dialect of *οἰκτιεῖς, βᾶσαι, πελῶ, ἦσαν.*

9. (*a*) Write down (1) the 3rd Sing. Pres. Ind.; (2) the Part Pres.; (3) the Pres. Infinit. of *εἰμί εἶμι*, and translate them into Latin. (*b*) Distinguish between, in Latin, *ποῦ, ποῖ, πόθεν, αὐτόθι, αὐτόθεν, αὐτόσε.* (*c*) Name the cases governed by *μετά, περί*, and *ἐπί*, severally, and point out how difference of case gives difference of meaning.

B.A. ORDINARY EXAMINATION.

FRIDAY, APRIL, 5TH :—MORNING, 9 TO 12.

GREEK.—{ AESCHINES.—CONTRA CTESIPHONTEM.
AESCHYLUS.—PROMETHEUS VINCTUS.

Examiner, ...REV. GEORGE CORNISH, LL.D.

1. Translate :—

(A) *Συνιδὼν δή τις ταῦτα νομοθέτης τίθησι νόμον οὐδὲν ἐπικοινωνοῦντα τῷ περὶ τῶν ὑπὸ τοῦ δήμου στεφανουμένων νόμῳ, οὔτε λύσας ἐκεῖνον· οὐδὲ γὰρ ἡ ἐκκλησία ἠνωχλεῖτο, ἀλλὰ τὸ θέατρον· οὔτ' ἐναντίον τοῖς πρότερον κειμένοις νόμοις τιθείς· οὐ γὰρ ἔξεστιν· ἀλλὰ περὶ τῶν ἄνευ ψηφίσματος ὑμετέροι στεφανουμένων ὑπὸ τῶν φυλετῶν καὶ δημοτῶν καὶ περὶ τῶν τοὺς οἰκέτας ἀπελευθερούντων καὶ περὶ τῶν ξενικῶν στεφάνων, καὶ διαρρήδην ἀπαγορεύει μήτ' οἰκέτην ἀπελευθεροῦν ἐν τῷ θεάτρῳ μήθ' ὑπὸ τῶν φυλετῶν ἢ δημοτῶν ἀναγορεύεσθαι στεφανούμενον, μηδ' ὑπ' ἄλλου, φησὶ, μηδενὸς, ἢ ἄτιμον εἶναι τὸν κήρυκα. ὅταν οὖν ἀποδείξῃ τοῖς μὲν ὑπὸ τῆς βουλῆς στεφανουμένοις εἰς*

τὸ βουλευτήριον ἀναρρηθῆναι, τοῖς δ' ὑπὸ τοῦ δήμου στεφανομένοις εἰς τὴν ἐκκλησίαν, τοῖς δ' ὑπὸ τῶν δημοτῶν στεφανομένοις καὶ φυλετῶν ἀπείπῃ μὴ κηρύττεσθαι τοῖς τραγῳδοῖς, ἵνα μηδεὶς ἐρανίζων στεφάνους καὶ κηρύγματα ψευδῆ φιλοτιμίαν κτᾶται, προσαπείπῃ δ' ἐν τῷ νόμῳ μηδ' ὑπὸ ἄλλου μηδενὸς ἀνακρύττεσθαι ἀπούσης βουλῆς καὶ δήμου καὶ φυλετῶν καὶ δημοτῶν,—ὅταν δέ τις ταῦτα ἀφέλῃ, τί τὸ καταλειπόμενόν ἐστι πλὴν οἱ ξενικοὶ στέφανοι;

(B) Ἡ δ' ἡμετέρα πόλις, ἡ κοινὴ καταφυγὴ τῶν Ἑλλήνων, πρὸς ἣν ἀφικνοῦντο πρότερον ἐκ τῆς Ἑλλάδος αἱ πρεσβεῖαι, κατὰ πόλεις ἕκαστοι παρ' ἡμῶν τὴν σωτηρίαν εὑρησόμενοι, νῦν οὐκέτι περὶ τῆς τῶν Ἑλλήνων ἡγεμονίας ἀγωνίζεται ἀλλ' ἤδη περὶ τοῦ τῆς πατρίδος ἐδάφους. καὶ ταῦθ' ἡμῖν συμβέβηκεν ἐξ ὅτου Δημοσθένης πρὸς τὴν πολιτείαν προσελήλυθεν. εὖ γὰρ περὶ τῶν τοιούτων Ἡσίοδος ὁ ποιητὴς ἀποφαίνεται. λέγει γάρ που, παιδεύων τὰ πλήθη καὶ συμβουλεύων ταῖς πόλεσι τοὺς πονηροὺς τῶν δημαγωγῶν μὴ προσδέχεσθαι. λέξω δὲ κἀγὼ ἔπη· διὰ τοῦτο γὰρ οἶμαι παῖδας ὄντας ἡμᾶς τὰς τῶν ποιητῶν γνώμας ἐκμανθάνειν, ἵν' ἄνδρες ὄντες αὐταῖς χρώμεθα.

πολλάκι δὴ ξύμπασα πόλις κακοῦ ἀνδρὸς ἀπηύρα,
ὅς κεν ἀλιτραίνῃ καὶ ἀτάσθαλα μηχανάαται.
τοῖσιν δ' οὐρανόθεν μέγ' ἐπήγαγε πῆμα Κρονίων,
λιμὸν ὁμοῦ καὶ λοιμόν, ἀποφθινύθουσι δὲ λαοί·
ἢ τῶν γε στρατὸν εὐρὺν ἀπώλεσεν ἢ ὅ γε τεῖχος,
ἢ νέας ἐν πόντῳ ἀποτίννυται εὐρύοπα Ζεύς.

ἐὰν δὲ περιελόντες τοῦ ποιητοῦ τὸ μέτρον τὰς γνώμας ἐξετάζητε, οἶμαι ὑμῖν δόξειν οὐ ποιήματα Ἡσιόδου εἶναι, ἀλλὰ χρησμὸν εἰς τὴν Δημοσθένους πολιτείαν· καὶ γὰρ ναυτικὴ καὶ πεζὴ στρατιὰ καὶ πόλεις ἀρδην εἰσὶν ἀνηρπασμέναι ἐκ τῆς τούτου πολιτείας.

2. (*a*) *ἠνχωλεῖτο*:—Explain the formation and mention other verbs of a like character. (*b*) *ἀπείπῃ μὴ κηρύττεσθαι*:—Explain the use of the negative particle. (*c*) Whence the quotation of ext. (B)? State what you know about the poem. Give the date of Hesiod. (*d*) *λπήυρα*:—Parse and point out any peculiarity of use here. *ἀπώλεσεν*:—Why the Aorist? (*e*) Derive and distinguish between *λιμὸν* and *ἀοιμόν*. Also between *παρασκευὴν* and *παράταξιν*.

3. (*a*) Define the meaning of the following terms:—*ὁ διώκων*, *ὁ φεύγων*, *γραφή*, *εἰσαγγελία*, *ἐπιτιμία*. (*b*) State the difference in meaning between:—*λόγον τυχεῖν* and *λόγον διδόναι*. *θεῖναι νόμους* and *θέσθαι νόμους*. *γράφειν παράνομα* and *γράφεσθαι παρανόμων*.

4. (*a*) *ἕκτῃ φθίνοντος τοῦ Ἐλαφηβολιῶνος μηνός*:—Give the date according to our mode of reckoning, and explain the Attic method of dividing the month. (*b*) Explain the following expressions:—(1) *τὰ Διονύσια*. (2) *αἱ ἐκκλησίαι*. (3) *ἀπογνώτω, καταγνώτω*. (4) *ἐρανίζων στεφάνους*. (5) *προξενίας εὑρημένοι*. (6) *τραγῳδῶν ἀγωνιζομένων καινῶν*. (7) *καθ' ἑκάστην πρυτανείαν*. (*c*) Point out the distinction between *προβούλευμα*, *ψήφισμα*, and *νόμος*.

5. At what date was the suit of Æschines against Ctesiphon instituted? How long time elapsed before the trial took place? State definitely the accusation which Æschines brought against Ctesiphon, and also the three distinct grounds on which he based it. How was the court constituted by which the case was tried?

6. Translate:—

(C) *ἡδύ τι θαρσαλέαις*
τὸν μακρὸν τείνειν βίον ἐλπίσι, φαναῖς
θυμὸν ἀλδαίνουσαν ἐν εὐφροσύναις. φρίσσω δέ σε δεκρομένα
μυρίοις μόχθοις διακναιόμενον.
Ζῆνα γὰρ οὐ τρομέων
αὐτόνῳ γνώμᾳ σέβει
θνατοὺς ἄγαν, Προμηθεῦ.
φέρ' ὅπως ἀχαρις, ὦ φίλος, εἰπὲ, ποῦ τίς ἀλκά;
τίς ἐφαμερίων ἀρηξις; οὐδ' ἐδέρχθης
ὀλιγοδρανίαν ἀκικυν,
ἰσόνειρον, ᾗ τὸ φωτῶν
ἀλαὸν γένος ἐμπεποδισμένον; οὔποτε θνατῶν
τὰν Διὸς ἁρμονίαν ἀνδρῶν παρεξίασι βουλαί.
ἐμαθον τάδε σὰς προσιδοῦσ' ὀλοὰς τύχας, Προμηθεῦ.
τὸ διαμφίδιον δέ μοι μέλος προσέπτα
τόδ' ἐκεῖνό θ' ὅτ' ἀμφὶ λουτρὰ
καὶ λέχος σὸν ὑμεναίουν
ἰότατι γάμων, ὅτε τὰν ὁμοπάτριον ἔδνοις
ἄγαγες Ἡσιόναν πιθὼν δάμαρτα κοινόλεκτρον.

(C) ΕΡ. *χλιδᾶν ἔοικας τοῖς παροῦσι πράγμασι.*
ΠΡ. *χλιδῶ; χλιδῶντας ὧδε τοὺς ἐμοὺς ἐγὼ*
ἐχθροὺς ἰδοιμι· καὶ σὲ δ' ἐν τούτοις λέγω.
ΕΡ. *ἦ κἀμὲ γάρ τι ξυμφοραῖς ἐπαιτιᾷ;*
ΠΡ. *ἁπλῷ λόγῳ τοὺς πάντας ἐχθαίρω θεούς,*
ὅσοι παθόντες εὖ κακοῦσί μ' ἐκδίκως.
ΕΡ. *κλύω σ' ἐγὼ μεμηνότ' οὐ σμικρὰν νόσον.*
ΠΡ. *νοσοῖμ' ἄν, εἰ νόσημα τοὺς ἐχθροὺς στυγεῖν.*
ΕΡ. *εἶης φορητὸς οὐκ ἄν, εἰ πράσσοις καλῶς.*
ΠΡ. *ὤμοι.* ΕΡ. *τόδε Ζεὺς τοὔπος οὐκ ἐπίσταται.*
ΠΡ. *ἀλλ' ἐκδιδάσκει πάνθ' ὁ γηράσκων χρόνος.*
ΕΡ. *καὶ μὴν σύ γ' οὔπω σωφρονεῖν ἐπίστασαι.*
ΠΡ. *σὲ γὰρ προσηύδων οὐκ ἂν ὀνθ' ὑπηρέτην.*
ΕΡ. *ἐρεῖν ἔοικας οὐδὲν ὧν χρῄζει πατήρ.*
ΠΡ. *καὶ μὴν ὀφείλων γ' ἂν τίνοιμ' αὐτῷ χάριν.*
ΕΡ. *ἐκερτόμησας δῆθεν ὡς παῖδ' ὄντα με.*

7. (*a*) The Prometheus Vinctus was the second drama of a Trilogy:—Give the Greek titles of the other two and their subjects. (*b*) Narrate briefly the legend of Prometheus. (*c*) Where is the scene of this play laid?

8. State as accurately as you can, the meaning, and give the derivation of the following words:—*λεωργόν, ἁπλάτου, κνώδαλα, ἀκικυν, ἀλαόν, ἐτήτυμα, ἄϊστον, ἀνήμεροι, ἀρθμόν, πέδοι, ἰότατι, ἀκραγεῖς*

9. Explain the dialect of the following, severally, and give the commonly received Attic equivalents of them:—*πεδαρσίοις, μᾶσσον, ἁρμοῖ, δᾱ, πωλεύμεναι, ἀχέτας, εἰβομένα.* Parse the following:—*βᾶσαι, φύλαξαι, προσῆξε, ἐδωρήσω, θράξαι, παρεξίασι, λέλακε, προσέπτα, ἐκτακείν, οἰκτιεῖς*—(Explain the formation of the last).

10. (*a*) Write down the scale of the *Anapaestic Dimeter Acatalectic*. (*b*) With what vowels can elision take place? Supply the elided vowels in *βούλεν', ἤδοι', τιν', αὐλῶν'*. (*c*) Resolve the following crases:—*χἠ, χὡσα, κεἰς, μἠχοιμι, οὐκ, οὐμοί.*

FIRST YEAR.

LATIN.—CICERO.—SELECT LETTERS.

WEDNESDAY, APRIL 3RD:—MORNING, 9 to 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate, expanding and translating the superscriptions:—

M. CICERO S. D. C. ANTONIO M. F. IMP.

(A) Etsi statueram nullas ad te litteras mittere nisi commendaticias—non quo eas intellegerem satis apud te valere, sed ne iis, qui me rogarent, aliquid de nostra coniunctione inminutum esse ostenderem—, tamen, cum T. Pomponius, homo omnium meorum in te studiorum et officiorum maxime conscius, tui cupidus, nostri amantissimus, ad te proficisceretur, aliquid mihi scribendum putavi, praesertim cum aliter ipsi Pomponio satis facere non possem. Ego si abs te summa officia desiderem, mirum nemini videri debeat; omnia enim a me in te profecta sunt, quæ ad tuum commodum, quæ ad honorem, quæ ad dignitatem pertinerent: pro his rebus nullam mihi abs te relatam esse gratiam, tu es optimus testis, contra etiam esse aliquid abs te profectum ex multis audivi; nam 'comperisse' me non audeo dicere, ne forte id ipsum verbum ponam, quod abs te aiunt falso in me solere conferri. Sed ea, quae ad me delata sunt, malo te ex Pomponio, cui non minus molesta fuerunt, quam ex meis litteris cognoscere.

CICERO ATTICO SAL.

(B) Brundisium veni a. d. XIIII. Kal. Maias: eo die pueri tui mihi a te litteras reddiderunt, et alii pueri post diem tertium eius diei alias litteras attulerunt. Quod me rogas et hortaris, ut apud te in Epiro sim, voluntas tua mihi valde grata est et minime nova. Esset consilium mihi quidem optatum, si liceret ibi omne tempus consumere—odi enim celebritatem, fugio homines, lucem aspicere vix possum—esset mihi ista solitudo, praesertim tam familiari in loco, non amara; sed itineris causa ut devorterer, primum est devium, deinde ab Autronio et ceteris quadridui, deinde sine te; nam castellum munitum habitanti mihi prodesset, transeunti non est necessarium. Quod si auderem, Athenas peterem; sane ita cadebat, ut vellem: nunc et nostri hostes ibi sunt et te non habemus et veremur ne interpretentur illud quoque oppidum ab Italia non satis abesse, nec scribis, quam ad diem te exspectemus.

(C) Neque tamen dubito quin tu in illo cubiculo tuo, ex quo tibi Stabianum perforasti et patefecisti Misenum, per eos dies matutina tempora lectiunculis consumpseris, cum illi interea, qui te istic reliquerunt, spectarent communes mimos semisomni. Reliquas vero partes diei tu consumebas iis delectationibus, quas tibi ipse ad arbitrium tuum compararas; nobis autem erant ea perpetienda, quae Sp. Maecius probavisset. Omnino, si quaeris, ludi adparatissimi, sed non tui stomachi; coniecturam enim facio de meo; nam primum honoris causa in scaenam redierant ii, quos ego honoris causa de scaena decesse arbitrabar; deliciae vero tuae, noster Aesopus, eius modi fuit, ut ei desinere per omnes homines liceret. Is iurare cum coepisset, vox eum defecit in illo loco 'si sciens fallo.'

2. Explain carefully the syntactical construction of the first sentence of ext. (A)., and distinguish between *quo* intellegerem and *quod* intellegerem.

3. Explain the following references:—(1) 'Comperisse.' (2) Autronio. (3) Ab Italia non satis abesse. (4) Stabianum perforasti. (5) Sp. Mæcius. (6) Noster Aesopus. (7) Operam et oleum perdidisse. (8) Familiam ducit. (9) Archilochio edicto.

4. (*a*) Expand, translate, and date according to our method the following (1) D. a. d. VI. K. Decemb. (2) D. a. d. III. Non. Oct. (3) Acta Kal. Sext. (4) HS. centiens. (5) L. J. Caes. C. M. Figulo Coss. (*b*) Give the dates and the occasions on which extt. (B) and (C) were severally written.

5. Parse the following verbs, giving the *Present Infinitive* of each:—Complectare, exirem, relaxaro, vivendi, decesse, exegero, periremus, subisses, luxerunt, accesserit, rejectum iri, sustulimus.

6. Give as accurately as you can the meaning and derivation, with derivatives in English, or cognates, if any:—Putidiusculi, lecticula, creterrarum, celebritatem, prudentia, kalendæ, nonæ, idus, aculeos, scrupulos.

7. Give two (or more) meanings of each of the following words, and mark the quantities of each:—annuis, leporis, levis, signa, canis, facies, mensis, pateris, quis, solis.

8. (*a*) Decline throughout:—(1) Uterque consul; (2) grave fenus; (3) nix alba. (*b*) Distinguish between the meaning of vestri and vestrum; hic, iste, ille, is; quis homo? and qui homo? (*c*) Conjugate (*a*) the *Pres. Ind.*; (*β*) the *Perf. Subjunct.*; and (*γ*) the *Fut. Perf.* of *prosum*.

9. Define and illustrate the correct use of the *Ablative Absolute*.

10. (*a*) Express in Latin variously;—His name was John:—What will become (*fio*) of my Tullia? (*b*) Give the leading constructions with *opus est*.

INTERMEDIATE EXAMINATION.

WEDNESDAY, APRIL 3RD:—MORNING, 9 TO 12.

LATIN.—CICERO.—PRO MURENA.

Examiners,..... { REV. GEORGE CORNISH, LL.D
REV. GEORGE WEIR, M.A.

1. Translate:—

(A) Saltatorem appellat L. Murenam Cato. Maledictum est, si vere obiicitur, vehementis accusatoris: sin falso, maledici conviciatoris. Qua re quum ista sis auctoritate, non debes, Marce, adripere maledictum ex trivio aut ex scurrarum aliquo convivio neque temere consulem populi Romani saltatorem vocare, sed circumspicere quibus præterea vitiis adfectum esse necesse sit eum, cui vere istud obiici possit. Nemo enim fere saltat sobrius, nisi forte insanit, neque in solitudine neque in convivio moderato atque honesto. Tempestivi convivii, amoeni loci, multarum deliciarum comes est extrema saltatio. Tu mihi adripis id, quod necesse est omnium vitiorum esse postremum: relinquis illa, quibus remotis hoc vitium omnino esse non potest. Nullum turpe convivium, non amor, non comissatio, non libido, non sumptus ostenditur. Et quum ea non reperiantur, quæ voluptatis nomen habent quæque vitiosa sunt, in quo ipsam luxuriam reperire non potes, in eo te umbram luxuriæ reperturum putas? Nihil igitur in vitam L. Murenæ dici potest? Nihil, inquam, omnino, iudices. Sic a me consu, designatus defenditur, ut eius nulla fraus, nulla avaritia, nulla perfidia nulla crudelitas, nullum petulans dictum in vita proferatur. Bene habeti iacta sunt fundamenta defensionis.

(B)Etquoniam non est nobis haec oratio habenda aut in imperita multitudine aut in aliquo conventu agrestium, audacius paullo de studiis humanitatis, quæ et mihi et vobis nota et iucunda sunt, disputabo. In M. Catone, iudices, haec bona quæ videmus divina et egregia ipsius scitote esse propria: quæ non numquam requirimus, ea sunt omnia non a natura, verum a magistro. Fuit enim quidam summo ingenio vir, Zeno, cuius inventorum æmuli Stoici nominantur. Huius sententiæ sunt et præcepta eius modu: sapientem gratia numquam moveri, numquam cuiusquam delicto ignoscere: neminem misericordem esse nisi stultum et levem: viri non esse neque exorari neque placari: solos sapientes esse, si distortissimi sint, formosos: si mendicissimi, divites: si servitutem serviant, reges: nos autem, qui sapientes non sumus, fugitivos, exsules, hostes, insanos denique esse dicunt: omnia peccata esse paria: omne delictum scelus esse nefarium nec minus delinquere eum, qui gallum gallinaceum, quum opus non fuerit quam eum, qui patrem suffocaverit: sapientem nihil opinari, nullius rei pœnitere, nulla in re falli, sententiam mutare numquam.

(C)Mihi credite, iudices, in hac causa non solum de L. Murenæ, verum etiam de vestra salute sententiam feretis. In discrimen extremum venimus: nihil est iam unde nos reficiamus aut ubi lapsi resistamus. Non solum minuenda non sunt auxilia, quæ habemus, sed etiam nova, si fieri possit, comparanda. Hostis est enim non apud Anienem, quod bello Punico gravissimum visum est, sed in urbe, in foro—di immortales! sine gemitu hoc dici non potest:—non nemo etiam in illo sacrario rei publicæ, in ipsa, inquam, curia non nemo hostis est. Di faxint ut meus collega, vir fortissimus, hoc Catilinæ nefarium latrocinium armatus opprimat! Ego togatus, vobis bonisque omnibus adiutoribus, hoc, quod conceptum res publica periculum parturit, consilio discutiam et comprimam! Sed quid tandem fiet, si hæc elapsa de manibus nostris in eum annum, qui consequitur, redundarint? Unus erit consul et is non in administrando bello, sed in sufficiendo collega occupatus.

2. Write short biographical notes on the following personages mentioned in this oration:—(1) Cato; (2) Zeno; (3) Diogenes Cynicus; (4) Servius Sulpicius; (5) Mithridates.

3. (*a*) In Ext. (B) account for the mood and tense in:—(1) Moveri. (2) Serviant. (3) Suffocaverit. (*b*) Explain the construction of:—(1) Tu *mihi* adripis. (2) *Nobis* hæc oratio habenda. (3) Quidam summo *ingenio*. (4) *Viri* non esse. (5) Si *servitutem* serviant. (6) Nullius *rei* pœniteres (*c*) Change from "Sapientem gratia" to "placari," in ext. (B), into the *oratio recta*.

4. Parse the following verbs, giving their principal parts:—Gesto, perfuncti sumus, peteres, inussisset, refregissem, excussa, interimendorum, proderant, delaturum, permaneto.

5. Give, as carefully as you can, the *meaning* and *derivation* of the following words, and give the cognate forms in Greek or English of any that have them :—Vicarium, lectulos, immo, sodalis, plebem, fastos, historicis, trivio, scurrarum, personam.

6. Explain the following :—(1) Judices. (2) Auspicato. (3) Quantum punctorum. (4) Cadere in judicio. (5) Comitiis centuriatis. (6) Res mancipi. (7) Signa contulit. (8) Ex Syngrapha. (9) Omen prærogativum, (10) Quem Euripum tot motus?

7. Illustrate by simple examples the constructions of:—*credo*, *careo*, *parco*, *antepono*, *interest*, *attinet*.

8. Give (*a*) the date of this oration; (*β*) the parties on either side in Murena's disputed election; (*γ*) the charges against him; and (*δ*) Cicero's chief arguments in rebuttal of them.

THIRD YEAR.

LATIN.—PLAUTUS.—AULULARIA.

MONDAY, APRIL 8TH :—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate into English :—

(A) Discrucior animi, quia ab domo abeundum est mihi.
Nimis hercle invitus abeo ; sed, quid agam, scio :
nam noster nostræ qui est magister curiæ,
dividere argenti dixit numos in viros ;
id si relinquo ac non peto, omnes illico
me suspicentur, credo, habere aurum domi :
nam non est verisimile, hominem pauperem
pauxillum parvi facere, quin numum petat.
Nam nunc, quom celo sedulo omnis, ne sciant,
omnes videntur scire, et me benignius
omnes salutant, quam salutabant prius;
adeunt, consistunt, copulantur dexteras ;
rogitant me, ut valeam, quid agam, quid rerum geram.
Nunc, quo profectus sum, ibo ; postidea domum
me rursum, quantum potero, tantum recipiam.

(B) I sane cum illo, Phrygia. Tu autem, Eleusium,
huc intro abi ad nos. CO. O Strobile subdole,
huccine detrusti me ad senem parcissumum,
ubi, si quid poscam, usque ad ravim poscam prius
quam quidquam detur? STR. Stultus et sine gratia es.
Ibi recte facere, quando, quod facias, perit.
CO. Qui vero? STR. Rogitas? Iam principio in ædibus
turba istic nulla tibi erit. Si qui uti voles,
domo abs te afferto, ne operam perdas poscere.
Hic apud nos magna turba ac magna familia est,
suppellex, aurum, vestes, vasa argentea:
ibi si perierit quidpiam (quod te scio
facile abstinere posse, si nihil obviam est),
dicant: coci abstulerunt: comprehendite,
vincite, verberate, in puteum condite!
Horunc tibi istic nihil eveniet: quippe qui
ubi quid subripias, nihil est. Sequere hac me. CO. Sequor.

(C) ME. Quid tu te solus e senatu sevocas?
EU. Pol ego, ut te accusem, merito meditabar. ME. Quid est?
EU. Quid sit, me rogitas? qui mihi omnis angulos
furum implevisti in ædibus misero mihi;
qui intromisisti in aedis quingentos cocos
cum senis manibus, genere Geryonaceo;
quos si Argus servet, qui oculeus totus fuit,
quem quondam Ioni Iuno custodem addidit,
is nunquam servet; præterea tibicinam,
quæ mi interbibere sola, si vino scatat,
Corinthiensem fontem Pirenen potest.
Tum obsonium autem . . . ME. Pol vel legioni sat est.
Etiam agnum misi. EU. Quo quidem agno sat scio
magis curionem nusquam esse ullam beluam.
ME. Volo ego ex te scire, qui sit agnus curio.
EU. Qui ossa atque pellis totust: ita cura macet;
quin exta inspicere in sole etiam vivo licet:
ita is pellucet, quasi laterna Punica.

2. Explain the construction off:—(*a*) Ut te dignam mala malam aetatem exigas. (*b*) Liberis procreandis. (*c*) Ejus honoris gratia feci. (*d*) Discru. cior animi. (*e*) Quid tibi meam tactio.

3. Explain the following words, both as to meaning and derivation:—Salutigerulos, aurifex, ciniflones, patagiarii, flammearii, propolæ, manulearii, phylacistæ, bellum, edepol, mecastor, secus.

4. (*a*) Parse, and give the ordinary forms of:—Med, ted, avom, mi, scibas, mutassis, ausim, fuat, faxint, respexis, face, cedo, sis, afferrier. (*b*) Whawere the original terminations of the Perf. Subj. and the Fut. Perf?

5. Explain the formation and meaning of the following :—Unde, clam, qui, foras, illuc, quin, palam, quoiquam, actutum, eccum, sicubi, quasi.

6. Write explanatory notes on :—(1) Lar. (2) Magister curiæ. (3) Nomen Postumus. (4) Cocus nundinalis. (5) Ad Trisviros. (6) Volsus ludius (7) Laterna Punica. (8) Fontem Pirenen.

7. (*a*) Translate and distinguish between :—Conduxi cædendum ; loces efferundum ; rogant utenda; vapulare ; verberare. (*b*) Give two (or more) meanings of each of the following words and mark the quantities :—Cadis, canet, canis, fides, gratis, labores, metas, orbis, passus, quis, satis, vivo. (*c*) Give the import of the Prepositions in :—Interbibere ; proloqui; profanum ; perbene a pecunia ; in viros dividere ; apud nos ; pro re nitorem.

8. (*a*) Illustrate the use of the Dative to express (1) the Remoter Object; (2) the Recipient ; and (3) Purpose. (*b*) Also the Ablative to express (1) Instrumentality and Agency ; (2) Quality ; and (3) Separation.

9. Write a short account of Plautus and of Roman Dramatic Literature.

B.A. ORDINARY EXAMINATION.

MONDAY, APRIL 8TH :—MORNING, 9 TO 12.

LATIN.—{ LIVY.—BOOK XXII. / JUVENAL.—SATIRES III. AND VIII.

Examiner,.....REV. GEORGE CORNISH, LL.D,

1. Translate :—

(A) Hæc est nobilis * * * pugna atque inter paucas memorata populi Romani clades. Quindecim millia Romanorum in acie cæsa sunt: decem millia sparsa fuga per omnem Etruriam aversis itineribus urbem petiere. Duo millia quingenti hostium in acie, multi postea utrimque ex vulneribus periere. Multiplex cædes utrimque facta traditur ab aliis : ego, præterquam quod nihil haustum ex vano velim, quo nimis inclinant ferme scribentium animi, Fabium æqualem temporibus hujusce belli potissimum auctorem habui. Hannibal captivorum, qui Latini nominis essent, sine pretio dimissis, Romanis in vincula datis, segregata ex hostium coacervatorum cumulis corpora suorum cum sepeliri jussisset, Flamini quoque corpus funeris causa magna cum cura inquisitum non invenit. Romæ ad primum nuntium cladis ejus cum ingenti terrore ac tumultu concursus in forum populi est factus : matronæ vagæ per vias, quæ repens clades adlata, quæve

fortuna exercitus esset, obvios percunctantur: et cum frequentis contionis modo turba in comitium et curiam versa magistratus vocaret, tandem haud multo ante solis occasum M. Pomponius prætor, "pugna," inquit, "magna victi sumus:" et quamquam nihil certius ex eo auditum est, tamen alius ab alio inpleti rumoribus domos referunt, "consulem cum magna parte copia- "rum cæsum, superesse paucos aut fuga passim per Etruriam sparsos, aut "captos ab hoste."

(B) "Ab hominibus nobilibus per multos annos bellum quærentibus "Hannibalem in Italiam adductum; ab iisdem, cum debellari possit, fraude "bellum trahi: cum quattuor legionibus universis pugnari posse apparuisse "eo, quod M. Minucius, absente Fabio, prospere pugnasset; duas legiones "hosti ad cædem objectas, deinde ex ipsa cæde ereptas, ut pater patronusque "appellaretur, qui prius vincere prohibuisset Romanos quam vinci: con- "sules deinde Fabianis artibus, cum debellare possent, bellum traxisse: id "fœdus inter omnes nobiles ictum, nec finem ante belli habituros quam "consulem vere plebeium, id est hominem novum fecissent: nam plebeios "nobiles jam eisdem initiatos esse sacris, et contemnere plebem, ex quo "contemni patribus desierint, cœpisse: cui non id apparere, id actum et "quæsitum esse ut interregnum iniretur, ut in patrum potestate comitia "essent? id consules ambos ad exercitum morando quæsisse; id postea, "quia invitis iis dictator esset dictus comi tiorumaucsa, expugnatum esse "ut vitiosus dictator per augures fieret: habere igitur interregnum eos; "consulatum unum certe plebis Romanæ esse: populum liberum habiturum "ac daturum ei, qui magis vere vincere quam diu imperare malit."

2. Construe and translate the following ext.; and comment on the reading *insectationi*, and on the use of *ab*:—

C. Terentio Varroni—quem sui generis hominem, plebi *insectationi* principum popularibusque artibus conciliatum, *ab* Q. Fabi opibus et dictatorio imperio concusso aliena invidia splendentem, vulgus et extrahere ad consulatum nitebatur—patres summa ope obstabant, ne se insectando sibi æquari adsuescerent homines.

3. (*a*) Give (1) the name; (2) the date; and (3) a description of the ocality of the battle referred to in ext. (A). (*b*) *Inter paucas clades*:—Name them. (*c*) *Memorata*:—Why does he use this expression? (*d*) *Fabium æqualem*:—Explain.

4. Write explanatory notes on the following:—(1) Plebeios nobiles. (2) Hominem novum. (3) Interrex. (4) Dictator. (5) Prodictator. (6) Prorogatum imperium. (7) Lectisternium. (8) Ludi magni.

5. (*a*) Give the derivation of:—Pontifex, plebs, augur, auspicium, profanum, penates, infestus, as. (*b*) Explain the forms:—Duellum, faxit clepsit.

6 Translate:—

(C) Pars magna Italiæ est, si verum admittimus in qua
Nemo togam sumit nisi mortuus. Ipsa dierum
Festorum herboso colitur si quando theatro
Majestas, tandemque redit ad pulpita notum
Exodium, quum personæ pallentis hiatum
In gremio matris formidat rusticus infans,
Æquales habitus illic similemque videbis
Orchestram et populum: clari velamen honoris,
Sufficiunt tunicæ summis Ædilibus albæ.
Hic ultra vires habitus nitor; hic aliquid plus
Quam satis est interdum aliena sumitur arca.
Commune id vitium est: hic vivimus ambitiosa
Paupertate omnes. Quid te moror? Omnia Romæ
Cum pretio. Quid das, ut Cossum aliquando salutes?
Ut te respiciat clauso Veiento labello?
Ille metit barbam, crinem hic deponit amati;
Plena domus libis genialibus! Accipe et istud
Fermentum tibi habe: præstare tributa clientes
Cogimur et cultis augere peculia servis.

(D) Defensor culpæ dicet mihi, "fecimus et nos
Hæc juvenes." Esto. Desisti nempe, nec ultra
Fovisti errorem. Breve sit, quod turpiter audes;
Quædam cum prima resecentur crimina barba;
Indulge veniam pueris: Lateranus ad illos
Thermarum calices inscriptaque lintea vadit,
Maturus bello, Armeniæ Syriæque tuendis
Amnibus et Rheno atque Istro. Præstare Neronem
Securum valet hæc ætas. Mitte Ostia, Cæsar,
Mitte: sed in magna legatum quære popina;
Invenies aliquo cum percussore jacentem,
Permixtum nautis et furibus ac fugitivis,
Inter carnifices et fabros sandapilarum
Et resupinati cessantia tympana Galli.
Æqua ibi libertas, communia pocula, lectus
Non alius cuiquam, nec mensa remotior ulli.
Quid facias talem sortitus, Pontice, servum?
Nempe in Lucanos aut Tusca ergastula mittas.
At vos, Trojugenæ, vobis ignoscitis, et quæ
Turpia cerdoni, Volesos Brutumque decebunt.

7. Write explanatory notes on the following allusions:—(1) *Verso pollice* occidunt. (2) Sumit *trechedipna*. (3) Fert *niceteria*. (4) Non fugiam *conchylia?* (5) Accipit *endromidem*. (6) Facinus *majoris abollæ*. (7) *Titanida pugnam*. (8) De *pulvino* surgat *equestri*. (9) Puellæ *sarcinulis* impar. (10) Perdere *naulum*.

8. Explain the following local references:—(1) Ventoso sub aggere. (2) Pomptina palus et Gallinaria pinus. (3) Ad Circum. (4) Suburræ. (5) Ad veteres arcus madidamque Capenam. (6) Ubi Dedælus exuit alas.

9. Discuss the meaning of:—(*a*) A facie jactare manus. (*b*) Claudit latus ingenuorum. (*c*) Cujus res legi non sufficit. (*d*) Opici mures. (*e*) Unius sese dominum fecisse laecrtæ. (*f*) In qua proseucha. (*g*) Proavorum atavos. (*h*) Jurat solam Eponam.

10. Give an account of the life of Juvenal, and comment on the style and characteristics of his satires.

FIRST YEAR.

HISTORY.—HISTORY OF GREECE AND ROME.

WEDNESDAY, APRIL 3RD:—AFTERNOON, 2 TO 4.

Examiner, ...REV. GEORGE CORNISH, LL.D.

1. Give an account of the physical and political geography of Greece Proper at the time of the Persian Wars.

2. Give the legendary genealogy of the Greek race. Whence the designations *Hellenes* and *Graeci*, severally?

3. What is meant by the *Return of the Heracleidæ*?

4. An account of Lycurgus and his Legislation. Define the terms *Spartani*, *Periœci*, *Neodamodes*, and *Helotes*.

5. State the position and origin of Trapezus, Massalia, Cyrene, Phocæa, Syracuse, Sybaris, Corcyra.

6. Narrate briefly the origin and leading events of the Persian Wars.

7. Give the dates of the establishment and overthrow of the monarchy at Rome, and write down the names of the kings in the order of their succession, and mention the important wars and political changes that took place during the reigns of any of them.

8. When, and under what circumstances, was the office of the *Tribunus Plebis* instituted? Give an account of its functions and powers.

9. Give a short account, with dates, of the following events:—(1) The invasion of Italy by the Gauls; (2) Establishment of the *Decemvirate*.

10. The leading events, with dates, of the First Punic War.

FIRST YEAR.

GREEK AND LATIN PROSE COMPOSITION.

TUESDAY, APRIL 2ND :—AFTERNOON, 2 TO 4.

Examiner,.....REV. GEORGE CORNISH, LL.D.

(A) Translate into Greek :—

1. The slave slew his master, and was afterwards found guilty of murder and condemned to death.

2. Æschylus, the poet, lived in the times of the Persian wars.

3. The good citizen is vexed when the bad have the administration of public affairs.

4. He said to the citizens: If you do this, you will greatly benefit the state and do me a very great favour.

5. The father told his son that if he loved the good and eschewed the bad he would be happy.

6. The general used to praise all those soldiers whom he saw acting well.

(B) Translate into Latin :—

1. It concerns all good citizens that the good should be rewarded and the bad punished, but this is very often disregarded.

2. The son was like his father, but he was by no means so fit for administering public affairs as his father.

3. The Sibyl came and asked him to buy the three remaining books at the same price.

4. At the end of the year he returned home from his province and his brother was the first to see him and welcome him.

5. After a rapid march, they met the enemy and fought with more courage than success, and then they returned to camp with more haste than order.

6. The grateful man not only feels thankful to his benefactors, but he also strives to return them thanks in words and to show them thanks by deeds.

7. All the best citizens hastened to assist the consul against the conspirators.

8. On receiving this letter, telling him that the enemy's forces had taken up their position only three miles away, he set out with all his men to meet them.

INTERMEDIATE EXAMINATION.

WEDNESDAY, APRIL 3RD :—AFTERNOON, 2 to 5.

LATIN PROSE COMPOSITION.

Examiners,..... { REV. GEORGE CORNISH, LL.D. / REV. GEORGE WEIR, M.A.

Translate into Latin :—

Meanwhile King Tarquinius set out with speed to Rome to put down the tumult. But Lucius turned aside from the road, that he might not meet him, and came to the camp; and the soldiers joyfully received him, and they drove out the sons of Tarquinius. King Tarquinius came to Rome, but the gates were shut, and they declared to him from the walls the sentence of banishment which had been passed against him and his family. So he yielded to his fortune and went to live at Caere with his sons Titus and Aruns. His other son, Sextus, went to Gabii, and the people there remembering how he had betrayed them to his father, slew him. Then the army left the camp before Ardea and went back to Rome. And all the men said, "Let us follow the good laws of the good king Servius; and let us meet in our centuries, according as he directed; and let us choose two men year by year to govern us, instead of a king." Then the people met in their centuries, in the field of Mars, and they chose two men to rule over them, Lucius Junius, whom men called Brutus, and Lucius Tarquinius, of Collatia. But the people were afraid of Lucius Tarquinius for his name's sake; for it seemed as though Tarquinius were still king over them. So they prayed him to depart from Rome, and he went and took all his goods with him and settled himself at Lavinium. Then the senate and the people decreed that all the house of the Tarquinii should be banished, even though they were not of the king's family. And the people met again in their centuries and chose Publius Valerius to rule over them, together with Brutus, in the room of Lucius Tarquinius of Collatia.

THIRD YEAR.

LATIN PROSE COMPOSITION.

MONDAY, APRIL 8TH :—2 TO 4, P.M.

Examiner,.....REV. GEORGE CORNISH, LL.D.

Translate into Latin :—

Pompey having conquered Domitius and taken Hiarbas prisoner, thought for those exploits he ought to be honoured with a triumph; but Sylla, who envied his rising fame, said that the reward which Pompey demanded was much too great for his deserts; and, besides, that this distinction, according to the practice of the Roman people, could not be conferred on one who had been neither dictator nor consul, and was but four-and-twenty years of age. Sylla himself was then advanced in years; and Pompey alluding to this is said to have used those words which have since become proverbial: "Lucius Sylla," said he, "it is in vain that you oppose me, for men worship the rising rather than the setting sun."

B.A. ORDINARY EXAMINATION.

FRIDAY, APRIL 5TH:—AFTERNOON, 2 TO 4.

LATIN PROSE COMPOSITION.

Examiner,.....REV. GEORGE CORNISH, LL.D.

Translate into Latin:—

The language of the Romans was not called Roman, but Latin. Politically, Rome and Latium, were clearly distinguished; but their language appears to have been the same. This language is different from the Etruscan and from Oscan; the Romans, therefore, are so far marked out as distinct from the great nations of central Italy, whether Etruscans Umbrians, Sabines, or Samnites. On the other hand, the connection of the Latin language with the Greek is manifest. Many common words, which no nation ever derives from the literature of another, are the same in Greek and Latin; the declensions of the nouns and verbs are to a great degree similar.

It is probable that the Latins belonged to that great race which, in very early times, overspread both Greece and Italy, under the various names of Pelasgians, Tyrsenians, and Siculians. It may be believed, that the Hellenians were anciently a people of this same race, but that some peculiar circumstances gave to them a distinct and superior character, and raised them so far above their brethren, that, in after ages, they disclaimed all connection with them. But in the Latin language there is another element besides that which it has in common with the Greek. This element belongs to the languages of central Italy, and may be called Oscan. Further, Niebuhr has remarked that whilst the terms relating to agriculture and domestic life are mostly derived from the Greek part of the language; those relating to arms and war are mostly Oscan. It s,smee then, not only that the Latins were a mixed people, partly Pelasgian and partly Oscan; but, also, that they arose out of a conquest of the Pelasgians by the Oscans; so that the latter were the ruling class of the united nation, the former were its subjects.

B. A. ORDINARY EXAMINATION.

MONDAY, APRIL 8TH :—AFTERNOON, 2 TO 4.

GENERAL PAPER.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Write a biographical sketch, with an account of their writings, of any two of the following :—(1) Æschylus ; (2) Livy ; (3) Juvenal.

2. (*a*) Give the probable derivation of the term *Amphictyon*. (*b*) Give an account of the object and origin and constitution of the Amphictyonic Council. Was its existence a benefit, or not, to the aggregate of the Grecian States? Give the reasons for your opinion.

3. (*a*) Within what period in the History of Greece did the Macedonian Supremacy fall? (*b*) What events and changes prepared the way for the establishment of that Supremacy? (*c*) From what race did the Royal family of Macedon claim descent?

4. Write a sketch of the public life and policy of Philip. How and when was he first brought into collision with Athens? Where and at what date was fought the decisive battle which humbled Greece under Philip?

5. Give an account of the events and pretexts which led to the Second Punic War. What do you regard as having been the real ground of the hostility between Rome and Carthage?

6. State what you know of the family of the human race to which the Carthaginians belonged. Where was their original home, and what were the leading features of their political and military institutions?

7. Mention the leading battles fought during the Second Punic War.

8. State what were the general results of that war to both combatants.

B, A. EXAMINATION FOR HONOURS IN CLASSICS.

LATIN POETS.

FRIDAY, MARCH 29TH:—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate, adding an explanatory note where you may deem it necessary on any peculiar form or construction:—

(A) Juvenal, Sat. VIII., vss. 146–162.
(B) Persius, Sat. VI., vss. 25–40.
(C) Horace, Satt., Book I., Sat. iii., vss. 41–56.
(D) Terence, Adelphi, Act. i., sc. 2, vss. 31–49.
(E) Plautus, Aulularia, Act iii., sc. 5, vss. 31–48.
(F) Virgil, Æneid, Book III., vss. 162–175.

2. Give the difference in meaning of the following various readings:—(Juvenal, Sat. VIII.) (*a*) *Humeroque—humerosque* minorem [4]. (*b*) *Fumosos—famosos* magistros [8]. (*c*) *Corythae—coryphaei*. (*d*) *Torvum—robum* juvencum [155]. (*e*) (Sat. X.) *Summas—sellas* curules [91]. (*f*) *Angusta—augusta* in rupe [93].

3. Discuss the meaning of the following (Persius, V. and VI.):—(*a*) Custos purpura (V. 30). (*b*) Fallere sollers (39). (*c*) Artificem vultum (40). (*e*) Masuri rubrica (90). (*f*) Lubrica Coa (135). (*g*) Cor Enni **** Pythagoreo (vi. 10–11). (*h*) Maris expers (39).

4. Analyse, and give the full equivalent of such forms as:—Quor, scin, quorsum, reist, operiere, faxo, hocine, quoi, quom, sodes.

5. (*a*) Explain the force of the prepositions in the following:—*Aul.*—Prol., 2, ex hac familia; ib. 21, ex se; I., 3, 40, in viros; II., 1, 33, in rem; ib. 2, 8, a pecunia; III, 2, 6, de industria. (*b*) Point out peculiarities of Syntax in Plautus and Terence, as compared with the usages of the Augustan writers. (*c*) Name the metre of ext. (E) and scan any four vss., carefully indicating the feet and quantities.

6. Cite archaic forms of words used by Virgil.

7. Institute a comparison between the three great Roman satirists in respect of the moral and literary characteristics of their writings.

8. Explain the uses of the moods in Latin with *quum*, and give the reasons for the following constructions:—

(*a*) Zenonem, cum Athenis *essem*, audiebam frequenter.
(*b*) Res, cum haec *scribebam*, erat in summum adducta discrimen.

LATIN PROSE WRITERS.

FRIDAY, MARCH 29TH:—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate the following extracts into English, adding a brief comment where any peculiar form or construction seems to you to require it:—

(A) Tacitus, Annals, Book II., chap. xlvi.

2. Write explanatory notes, grammatical or otherwise, as the case may be, on the following:—(*a*) Vacuas legiones. (*b*) Transfugiis nudatus. (*c*) Missus paci firmator. (*d*) Aegypto remeans. (*e*) Proficisitur cognoscendæ antiquitatis. (*f*) Laetus animi. (*g*) Idistaviso. (*h*) Egressus augurali.

3. Translate:—

(B) Tacitus, Histories I., chaps. lxi.-lxii.

4. Ext. (B):—(1) Give the date of the events here recorded, and name the Emperors that occupied the throne that same year. (2) 'Cottianis Alpibus, Poeninis jugis';—define the positions and give modern names. Also those of Lugdunenses, Viennenses, Lucus, Vercellai. (3) Chap. lxxix., Histt. I.—'Sarmatiea gens';—who and where did they dwell? (4) ib. 'Romanus miles * * * lorica missili pilo, aut lanceis, levi gladio';—describe the equipment of the *legionarius*, and carefully explain the above terms, pointing out to what class of troops *lanceis* applies.

5. Translate:—

(C) Livy, Book XXII., chap. xlvii.

6. Ext. (C):—(1) Acrius tamen quam diutius;—give the import of the comparatives. (2) Give the date and locality of the battle here described. Was it followed by any important consequences? (3) A short account of Livy as a historian;—to what extent may his story of the campaigns of Hannibal be regarded as trustworthy or the opposite, and why?

7. Translate:—

(D) Cicero:—De Officiis, Book II., Chap. viii., §§ 28 and 29, down to *putare singuli*.

8. (*a*) "Ex ea urbe triumphari;" "Ex transalpinis bellis triumpharunt";—Distinguish, and give the import of the preposition in each expression Explain the special historical events to which Cicero refers in this ext (*b*) "Audientem Cratippum idque Athenis":—Write a short account of Cratippus, and of the literary and educational position of Athens at this time. (*c*) When and why did Cicero write this treatise?

9. Translate:—

(E) Cicero, De Imp. Cn. Pomp. chap. xxiv., §§ 69-70.

10. To what extent is the character which Cicero in this oration gives to Pompey borne out by his public and private life?

GREEK POETS.

FRIDAY, APRIL 17TH:—MORNING, 9 TO 12.

Examiner,..... REV. GEORGE CORNISH, LL.D.

1. Translate, with an explanatory note when you deem it necessary:—

(A) Pindar, Olympia, IX., vss. 32–71.

2. (*a*) On what occasion was this Ode written, and where was it sung? (*b*) Give an account of the life and character of Pindar as a poet, referring especially to his practice of writing epinician odes. (*c*) Comment on and explain the following:—(1) *καλλίνικος ὁ τρίπλοος*. (2) *κωμάζοντι*. (3) *χαμαιπετέων*. (4) *στεφάνων ἀωτοι*. (5) *ὑποκρέκει*. (6) *πανάγυριν Αυκαίου*. (*d*) Describe the dialect used by Pindar.

3. Translate:—

(B) Sophocles, Antigone, vss. 781–805.

4. (*a*) Distribute ext. (B) into *strophe*, *antistrophe*, and *systema* and explain the meaning of these terms. (*b*) Name the metres used in the strophe and systema, and scan these parts. (*c*) Explain grammatically:—(*a*) *νῷν ἔτι ζώσαιν*, vs. 3. (*b*) *τῶν ἐχθρῶν κακά*, vs. 10. (*c*) *μῦθος φίλων*, vs. 11. (*d*) *εἴτ' ἐσθλῶν κακή*, vs. 38. (e) Give the various readings and interpretations of vs. 71.

5. Translate:—

(C) Æschylus, Seven against Thebes, vs. 422–436.

(D) Euripides, Hippolytus, vss. 311–331.

(E) Aristophanes, The Frogs, vss. 684–705.

6. (*a*) Give the scheme of the metre and scan the first four vss. of ext. (E). (*b*) By what term was that part of the play from which the above ext. is taken designated? (*c*) Explain the following references and expressions:—(1) *ἐξισωσῶσαι τοὺς πολίτας*. (2) *Φρυνίχου παλαίσμασιν*. (3) *Πλαταιᾶς εἶναι*. (4) *ὁ πονηρότατος βαλανεύς*. (5) *μειαγωγήσουσι*. (*d*) At what date was this play brought out?

7. How does Aristophanes characterize the Seven against Thebes? How may the popularity of this drama in ancient and later times be accounted for? By what other Dramatists, and in what plays, has the subject of the expedition of Polynices against Thebes, and the events consequent thereupon, been treated?

8. Translate:—

(F) Theocritus, Idyl V., vss. 80-101.

(G) Hesiod, Works and Days, vss. 491-509.

9. Parse, and give Attic equivalents of the following from Pindar and Theocritus:—*ἐπικύρσαις*, *γεγάκειν*, *δαέντι*, *μάσσονα*, *ἄπνευ*, *κεινός*, *θᾶσαι*, *μέσφα*, *τώς*, *τῶ*.

10. Write etymological notes on:—*ἐπαλέα*, *λέσχην*, *λεπτῇ*, *δυσηλεγέες*' *τροχαλόν*, *ἑκητ ἄπλατοι*—*ἄπληποι*—*ἄπλαστοι* (147), *ἄρειον*.

GREEK PROSE WRITERS.

THURSDAY, APRIL 25TH:—MORNING, 9 TO 12.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. Translate, adding an explanatory note where you deem it neces sary, the following extracts:—

(A) Thucydides, Book I., Chap. lxii.

(B) Herodotus, Book IX., Chap. xcvi.

(C) Xenophon, Hellenics, Book II., Chap. iii., §§ 30-31.

2. (*a*) Write short notes explanatory of the references to political and physical occurences in Ext. (A.) (*b*) Write a critrique on the style of Thucydides, pointing out his grammatical and rhetorical peculiarities. (*c*) What is the relative value of Thucydides and Herodotus as historical authorities? On what grounds is their respective value to be estimated?

3. Explain grammatically, or otherwise, as may be necessary, the following ext.:—(*a*) Thuc., I., 144;—*ἢν καὶ Λακεδαιμόνιοι ξενηλασίας μὴ ποιῶσι.* (*b*) ib., 138;—*οὐ γὰρ ἐξῆν θάπτειν ὡς ἐπὶ προδοσίᾳ φεύγοντος.* (*c*) ib., 131;—*καὶ σκυτάλην εἶπον τοῦ κήρυκος μὴ λείπεσθαι.* (*d*) ib., 120; *ἀνδρῶν γὰρ * * * εἰ μὴ ἀδικοῖντο.* Show the force of the Opt. (*e*) ib. 48;—*διέκπλοι δ' οὐκ ἦσαν.* (*f*) ib., 22;—*ὡς ἑκατέρων τις εὐνοίας ἢ μνήμη ἔχοι.*

4. Write short notes explanatory of the following historical or other references from Herodotus and Xenophon:—(*a*) Herod. VIII., 3;—*πρόφασιν τὴν Παυσανίεω ὕβριν κ. τ. λ.* (*b*) ib., 6;—*μηδὲ πυρφορον ἐκφυγόντα περιγενέσθαι.* (*c*) ib., 65:—*τὸν μυστικὸν ἴακχον.* (*d*) ib., 74; —*αὐτόχθονες ἐόντες.* (*e*) Xen., Hellen., II., cap. ii., § 30;—*μεταστῆσαι τὴν δημοκρατίαν εἰς τοὺς τετρακοσίους.* (*f*) ib., 4, § 5;—*θέμενος τὰ ὅπλα.*

5. Translate:—

(D) Aristotle, De Poetica, Chap. vi., §§ 15-19, inclusive.

6. (*a*) Define briefly the following terms which occur in this treatis:—*ποιητική, ἐποποιία, μίμησις, ῥυθμῷ καὶ μέλει καί μέτρῳ, ἐπεισόδιον, πρόλογος, τραγῳδία.* (*b*) What is the condition of the Text of the De Poetica?

7. Translate:—

(E) Plato, De Republica, Book I., chap. xxiv., §§ A to D, inclusive.

8. Translate :—

(F) Demosthenes, De Corona, §§ 261-62 (Ed. Tauch.), Ἐπὶ ἄρχοντος Πολυκλέους down to end of the Κατάλογος.

9. An account of the τριηραρχία, of the βουλὴ τῶν πεντακοσίων, and of the ἐκκλησία at Athens. Ὁ νομοθέτης :—Who is meant?

LATIN PROSE COMPOSITION.

THURSDAY, APRIL 4TH :—MORNING, 9 TO 12.

Examiner,..... .....REV. GEORGE CORNISH, LL.D.

Translate into Latin :—

There was a citizen of Lanuvium, named L. Thorius Balbus; before your time. In his habits of life, he exhausted the most exquisite pleasures the imagination can devise. He was not only fond of luxury, but was a refined and versatile patron of all its branches; free from superstition, inasmuch as he despised the sacrifices and temples so numerous in his birth-place; fearless of death, inasmuch as he died on the battle-field in his country's cause. His pleasures were not bounded by the limitations of Epicurus, but by his own satiety. Nevertheless, he was careful of his health; he practised those exercises which secured him an appetite at dinner; his fare was at once the most delicious and the easiest of digestion; wine he used alike for luxury and for health. Nor did he neglect those other pleasures, in the absence whereof Epicurus declares he cannot understand how anything can be good. Pain of every kind was a stranger to him; though had it assailed him, he would have borne it with courage. He had a fine complexion, excellent health, courteous manners: in one word, a life teeming with pleasures of every description. Now, your principles argue Thorius a happy man. For my own part, I will not presume to mention one whom I prefer to him: Virtue herself shall speak in my name; and she will not scruple to prefer Marcus Regulus to your representative of happiness. Regulus—who of his own free will, and unfettered by constraint, in fulfilment of a pledge he had given the foe, returned from his own country to Carthage—is pronounced by Virtue to have been, amid the very agonies of exposure and hunger, a happier man than Thorius amid the roses of the most exquisite banquet. He had waged momentous wars; he had twice been consul; he had triumphed; nevertheless, he did not consider those former achievements so great and glorious as the final catastrophe which his own good faith and constancy had brought upon him: a catastrophe which excites our compassion, but was a real luxury to the sufferer. It is not only in mirth and playfulness, or in laughter and jest, the accompaniments of frivolity, that men are happy. No! integrity and constancy lend happiness even to sorrow.

GREEK PROSE COMPOSITION.

THURSDAY, APRIL 4TH:—AFTERNOON, 2 TO 5.

Examiner, ...REV. GEORGE CORNISH, LL.D.

Translate into Greek (accented) :—

Greece attests what I say; for though she was devoted to the study of eloquence, and has long excelled all her competitors in it, yet all her arts are of greater antiquity, and were not only invented, but brought to perfection, before her remarkable force and fluency of style was wrought to its utmost finish. And when I turn my eyes towards Greece, your beloved Athens is the most conspicuous and brilliant image that meets my eye; for in that city an orator first reared his head, and eloquence was first consigned to enduring literary record. Yet before the age of Pericles (to whom some writings are attributed) and of Thucydides, who flourished not in the infancy, but in the maturity of Athens, there is no literature of elegance and finish, and bearing the stamp of an orator's art. Though a belief prevails that Pisistratus, who preceded them by many years, and Solon in a still earlier æra, and subsequently Cleisthenes, were very influential speakers for those days. Several years later, as we ascertain from Attic records, lived Themistocles, who was evidently as distinguished for his eloquence as for his political wisdom. After him, Pericles, who had culled the flower of every excellence, yet was chiefly illustrious for his eloquence. Cleon, in the same age, though a very turbulent citizen, was undoubtedly an able speaker. Nearly cotemporary were Alcibiades, Critias, Theramenes. Of the style of oratory then in vogue, we may form a clear estimate from the writings of Thucydides, who flourished in those days. Their style was lofty and sententious; their narrative was pregnant and condensed; and for that very reason, it occasionally bordered on obscurity.

HISTORY OF GREECE AND ROME.

FRIDAY, APRIL 17TH:—AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH, LL.D.

1. (*a*) Give the legendary history of the Dorians, with an account of their conquest of the Peloponnesus. (*b*) What is the value, historically, of the legend of the Return of the Heracleidæ? (*c*) Distinguish between the Σπαρτιῆται, the Περίοικοι, and the Εἵλωτες.

2. Give, with dates when you can, the geographical limits and tribal divisions of Greek Colonization.

3. The hegemony of Athens, Sparta and Thebes in the political affairs of Greece;—discuss the events and causes that in each case contributed to its establishment and fall.

4. Describe in outline the institutions of the Athenian Democracy under Pericles, and compare them with modern institutions of the same kind.

5. What were the οἱ Ἀμφικτύονες? Derive the name. How was the most famous of them constituted, and what part did they play in Grecian affairs?

6. The Achæan League;—its members, objects, and results.

7. Trace the most important constitutional changes at Rome, giving the occasion and dates of each.

8. Explain the origin and meaning of the phrases: *Patres Conscriptii; Populus Romanus; Quirites; Plebs.*

9. The powers and functions of the office of Dictator. Whence was it derived, and what was the origin of the title?

10. The power of Carthage in the Western Mediterranean before its collision with Rome. Comment on the causes which enabled Rome to overcome Carthage.

11. The objects of the agitation of the Gracchi, and the causes of their failure.

12. What causes led to the abolition of the old Republic and the establishment of the monarchy under Julius Cæsar and his successors? Give an account of the state of Rome at this period in respect of religion, literary culture, and material resources.

GENERAL PAPER.

THURSDAY, APRIL 25TH —AFTERNOON, 2 TO 5.

Examiner,.....REV. GEORGE CORNISH LL.D.

1. What was the original seat of the Aryan race? Name the principal languages of the Aryan family. How is Sanscrit related to Greek and Latin? With what Greek dialect is Latin most closely connected?

2. Give Grimm's law for the interchange of consonants in the Greek and cognate languages, with instances.

3. Show the connection between the following words and their cognates in Greek or Latin, or in both:—*five, eight, ten, brother, sister heart, fish, foot, draw, way, thatch, lay.*

4. What are the general principles regulating the conjunction of cases with the Verbs in the following, severally:—(1) *ἀλγῶ τὴν ᾠδθοαεφ* (2) *ἐπιτεραμμένοι τὴν φυλακήν.* (3) *λέγειν λόγον.* (4) *ἤκουσε βουλήνκ ἰοντος.* (5) *μεμνῆσθαι τινός.* (6) *ὅπλοις χρῆσθαι.* (7) *Nubere alicui.* (8) *Æris indigere.* (9) *Carne vesci.* (10) *Parvi facere.*

5. Analyse the following grammatical forms:—*βίηφι, ἐσχον, ἄνωχθι, σύτο, ἔμολον,* ruri, rure, sicubi, ibi, aurai, divôm.

6. Derive and explain the meaning of:—*ala, anceps, bruma, contio, mollis, carcer, lustrum, consul, provincia.*

7. Distinguish between the meanings of the following words according to the difference of their accentuation:—*καλος, πειθω, τροπος, ην, η, ειμι, εν, ει, εια, ανα, αν, ω.* (*b*) Accentuate with the proper spiritus, the following:—*Ο μεν ουν παρων καιρος, ω ανδρες Αθηναιοι, ειπερ πρτε, πολλης φροντιδος και βουλης δειται· εγω δε ουχ ο τι χρη περι την παρουντων συμβουλευσαι χαλεπωτατον ηγουμαι, αλλ' εκειν' απορω, τινα χρη τροπον, ω ανδρες Αθηναιοι, προς υμας περι αυτων ειπειν. πεπεισμαι γαρ εξ ων παρων και ακουων συνοιδα τα πλειω των πραγματων υμας εκπεφευγεναι τω μη βουλεσθαι τα δεοντα ποιειν, ου τω μη συνιεναι.*

8. Explain, and illustrate by examples, what is meant by:—*Epitheton ornans; Hendiadys; Anacoluthon; Pleonasm; Zeugma; Oxymoron; Meiosis; Hypallage.*

9. What changes in the construction and representation of Attic tragedies are ascribed to Æschylus, Sophocles, and Euripides, severally?

10. Write explanatory notes on the following words and phrases in their reference to the Greek Drama:—*τραγωδία, χορηγός, τὸ θεωρικον, χορὸδ ιδόναι, χορὸν διδάσκειν, θυμέλη, Διονύσια τὰ ἐν ἄστει, ἐρίρρημα.*

MATHEMATICS AND NATURAL PHILOSOPHY.

FIRST YEAR.

EUCLID—ARITHMETIC.

FRIDAY, APRIL 5TH —MORNING, 9 TO 12.

Examiners,..... { ALEXANDER JOHNSON, LL.D. / ARCHIBALD DUFF, M.A.

1. From a given straight line cut off one-fifth part.

2. If the sides of two triangles, about each of their angles, be proportionals, the triangles are equiangular, and have their equal angles opposite to the homologous sides.

3. If from any point without a circle straight lines be drawn to the circumference, the least is that which, when produced, passes through the centre.

4. Construct a triangle each of whose base angles shall be double the vertical angle.

5. If a straight line be bisected and also divided into two unequal parts, the sum of the squares of the unequal parts shall be equal to twice the square of half the line together with twice the square of the line between the points of section.

(*a*) Divide a given straight line into two parts such that the sum of their squares shall be equal to a given square.

6. If four straight lines be proportionals, the similar rectilineal figures similarly described on the first and second shall have the same ratio as that of the similar rectilineal figures similarly described on the third and fourth ; and if the similar rectilineal figures similarly described on four straight lines be proportionals, those straight lines shall be proportionals.

7. From 1 lb. Troy of standard gold are coined $46\frac{2}{11}\frac{9}{0}$ sovereigns ; and, n every 24 carats of this gold, 2 carats are alloy. Find (*a*) the price per oz. in (£. s. d.) of standard gold, (*b*) the weight of standard gold in 75 sovereigns, (*c*) the weight of pure gold in 275 sovereigns.

8. A person pays $54 for the insurance of goods at $3\frac{3}{4}$ per cent. ; and he finds, that in case of the goods being lost, he will by this means be entitled to the value of the goods, the premium of insurance, and $5 besides. What is the value of the goods ?

9. Find the number of square feet on the surface of 7 boxes, each of which is $5\frac{1}{2}$ feet long, 29 inches high, and 37 inches wide. Find also the number of cubic feet they would occupy.

10. In a certain alloy, there are 11 parts tin to 100 of copper. Calcuate the weight of tin in a mass of the alloy weighing 24 cwt.

11. Multiply 2.156 by .0341 and divide the product by .00456.

12. Subtract $3\frac{1}{6}$ from 5.04 and divide the remainder by the sum of $\frac{3}{4} + \frac{5}{6} + \frac{7}{8} - 1\frac{1}{2}$.

FIRST YEAR.

TRIGONOMETRY—ALGEBRA.

MONDAY, APRIL 8TH:—MORNING, 9 TO 12.

Examiners,..... { ALEXANDER JOHNSON, LL.D.
ARCHIBALD DUFF, M.A.

1. If A'' be the number of seconds in any angle whose circular measure is α prove

$$A'' = \frac{\alpha}{\sin 1''}$$

2. Trace the changes of sign of the sine, cosine and tangent as the angle increases from 0° to 360°.

3. Prove that the area of any triangle $= \frac{1}{2} b c \sin A$.

α. Assuming the values for $\sin \frac{1}{2} A$ and $\cos \frac{1}{2} A$ in terms of the sides, find the expression for the area in terms of the three sides.

4. Find the greatest value of the versed sine of an angle.

5. Prove that $\sin (A + B) = \sin A \cos B + \cos A \sin B$.

6. Given $\sin A = \frac{91}{109}$, find $\tan A$, $\sec A$, and $\cos A$.

7. Prove that in a plane triangle

$$a + b : a - b :: \tan \tfrac{1}{2} (A + B) : \tan \tfrac{1}{2} (A - B)$$

(a). Show that $\tan \frac{1}{2} (A + B) = \cot \frac{1}{2} C$.

8. Solve the following:—

(a.) $\dfrac{6x + 7}{9} + \dfrac{7x - 13}{6x + 3} = \dfrac{2x + 4}{3}$

(b.) $\left\{ \dfrac{3x - 7y}{3} = \dfrac{2x + y + 1}{5}, \text{ and } 8 - \dfrac{x - y}{5} = 6 \right\}$.

9. Simplify the following expressions:—

(a.) $x^{2-a-b} \times x^{b-\frac{3}{2}} \div x^{-(a-\frac{1}{2})}$;

(b.) $\dfrac{1}{a-b} + \dfrac{1}{a+b} \times \dfrac{2a}{b^2 - a^2} + \dfrac{\dfrac{a}{b} + 1}{\dfrac{b}{a} - 1}$

10. Solve the following quadratics:—

(a.) $\dfrac{x^2 + 1}{2x} + \dfrac{x - 1}{4} = 3x - 2$; ($b$.) $\sqrt{5 + 2x} + \sqrt{5 - x} = 3$.

11. Find the greatest common measure of $x^5 - 2x^3 + x^2 - 2$ and $x^4 - 2x^3 + 4x - 4$.

12. Solve the equations:—

(*a.*) $\dfrac{x - \frac{1}{2}(x-3)}{x-2} - \dfrac{3x-5}{4(3-x)} = \dfrac{7}{2}$;

(*b.*) $\left\{ \dfrac{x}{a} + \dfrac{y}{b} = \dfrac{1}{c},\ \dfrac{x}{a'} + \dfrac{y}{b'} = \dfrac{1}{c'} \right\}$

13. The sum of two numbers is m, and the difference of their squares is n^2; find the numbers.

SECOND YEAR.

CONIC SECTIONS AND SOLID GEOMETRY.

SATURDAY, MARCH 16TH, 1878:—MORNING, 10 TO 12.

Examiner,.....ARCHIBALD DUFF, M.A.

1. The tangent to a hyperbola at any point bisects the angle between the focal distances of the point.

2. The sum of the focal distances of any point on an ellipse is equal to the major axis.

3. The area of the segment of a parabola cut off by any chord is two-thirds of the area of the triangle contained by that chord and the tangents at its extremities.

4. The parameter of any diameter of a parabola is four times the focal distance of the extremity of that diameter.

5. The distance of any point inside a parabola from the focus is less than the distance of the point from the directrix; and the distance of any point outside the curve from the focus is greater than its distance from the directrix.

6. Every solid angle is contained by plane angles, which are together less than four right angles.

7. Planes to which the same straight line is perpendicular are parallel to one another.

8. If a straight line stand at right angles to each of two straight lines at the point of their intersection, it shall also be at right angles to the plane in which they are.

9. If two straight lines be cut by parallel planes, they shall be cut in the same ratio.

INTERMEDIATE EXAMINATION.

EUCLID—ARITHMETIC.

FRIDAY, APRIL 6TH:—MORNING, 9 TO 12.

Examiners,..... ..... { ALEXANDER JOHNSON, LL.D.
REV. A. N. MCQUARRIE, B.A.
ARCHIBALD DUFF, M.A.

1. Find a mean proportional between two given straight lines.

2. If the square described on one side of a triangle be equal to the sum of the squares described on the other two sides, the angle subtending the first-mentioned side is a right angle.

3. In equal circles, angles at the centres are to another as the arcs on which they stand: so also are the sectors.

4. The angle in a semicircle is a right angle; the angle in a segment of a circle greater than a semicircle is less than a right angle, and the angle in a segment less than a semicircle is greater than a right angle.

5. If a right line be divided into any two parts, the squares on the whole line and one of the parts are, together, equal to twice the rectangle under the whole line and that part, together with the square on the other part.

6. Construct an isosceles triangle having each of the angles at the base double the vertical angle.

a. If the radius be 10 inches, find the side of a regular decagon inscribed in circle.

7. In a right-angled triangle, a perpendicular drawn from the right angle to the opposite side divides the figure into two triangles, similar to the whole and to each other.

a. The perpendicular is a mean proportional between the segments of the hypotenuse, and each side is a mean proportional between the hypotenuse and the adjacent segment.

8. Find the value of $.\dot{6}$ of an acre + ·625 of a rood $-\frac{4}{11}$ sq. perch.

9. What sum of money will amount to £138 2s. 6d. in fifteen months at five per cent. per annum simple interest?

10. Find the square roots, each to three places of decimals, of ·051 and $\frac{4·41}{·64}$

11. I purchase goods in London for £43 17s. sterling, and, after paying $17\frac{1}{2}$ per cent. *ad valorem* duties, I sell them here for £76 pounds Canadian currency. Neglecting other expenses, find how much per cent. I gain or lose, supposing a pound sterling to be worth $4.87.

12. Assuming the volume of a sphere to be $\frac{4}{3}\pi r^3$ (r = radius), calculate the weight of a hollow sphere of lead 8 inches in external diameter and 1 inch thick; the ratio of the weights of equal bulks of lead and water being 11.35, and a cubic inch of water weighing 252.5 grains.

13. Reduce to its simplest form

$$\frac{13\frac{1}{2} + \frac{1}{2}(\frac{3}{8} - \frac{2}{3})}{\frac{3}{4} \times \frac{5}{6}(.6 - \frac{1}{2})}$$

INTERMEDIATE EXAMINATION.

TRIGONOMETRY—ALGEBRA.

MONDAY, APRIL 8TH:—MORNING, 9 to 12.

Examiners,..... { ALEXANDER JOHNSON, LL.D. / REV. A. N. MCQUARRIE, B.A. / ARCHIBALD DUFF, M.A.

1. Prove $\tan A = \frac{\sin A}{\cos A}$; $\sec A = \sqrt{1 + \tan^2 A}$.

2. Prove $\sin(A - B) = \sin A \cos B - \cos A \sin B$.

3. If tan A = 0·6, calculate the other functions of A: and if sin B = 0·42, calculate sin (A + B).

4. Prove that the sum of the sines of any two angles is to the difference of their sines in the same ratio as the tangent of half the sum of the angles is to the tangent of half their difference.

5. Find the area of a triangle, two of whose sides are 123·2 feet and 76 feet and the included angle 49°.

6. Wishing to ascertain the height of a church steeple, I select two stations in line with it and 156 feet apart; at those stations I find the elevations to be 58° 14′ and 36° 42′ respectively. The height of my eye above the ground is 4 ft. 6 in.; what is the height of the steeple?

7. Show that $1 + \frac{a^2 + b^2 - c^2}{2ab} = \frac{(a + b + c)(a + b - c)}{2ab}$

8. Solve the equations

(a.) $\frac{2x + a}{3(x - a)} + \frac{3x - a}{(2x + a)} = 2\frac{1}{6}$

(b.) $\sqrt{5(x + 2)} = \sqrt{5x} + 2$;

(c.) $\left.\begin{aligned} x + y &= 6 \\ x^3 + y^3 &= 72 \end{aligned}\right\}$

9. Some smugglers found a cave which would just exactly hold the cargo of their boat, viz., 13 bales of silk and 33 casks of rum. While unloading, a revenue cutter came in sight, and they were obliged to sail away, having landed only 9 casks and 5 bales, and filled one-third of the cave. How many bales separately or how many casks would it hold?

10. Solve the following:—

(*a.*) $\left.\begin{matrix} \frac{x^2}{y^2} = \frac{85}{9} - \frac{4x}{y} \\ x - y = 2 \end{matrix}\right\}$; (*b.*) $\frac{\sqrt{(x+2a)} - \sqrt{(x-2a)}}{\sqrt{(x-2a)} + \sqrt{(x+2a)}} = \frac{x}{2a}$

(*c.*) $\frac{6x+7}{9} + \frac{7x-13}{6x+3} = \frac{2x+4}{3}$.

11. Find a number such that if 18 be added to the product of its half by its third, the sum shall be four times the number.

12. Solve the simultaneous equations:—

$$\left.\begin{matrix} \frac{G}{g} + \frac{Q}{q} = \frac{N}{n} \\ G + Q = N \end{matrix}\right\}$$

where G and Q are the unknown quantities.

THIRD YEAR.

HYDROSTATICS—OPTICS.

TUESDAY, APRIL 2ND:—MORNING, 9 to 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Investigate a formula for determining the quantity of air that must be forced into a diving bell of given height, when sunk to a given depth in the sea, in order to keep the water down to a given level in the bell.

2. Given the volumes, pressures, temperatures and specific gravities of a number of gases that are to be mixed together, investigate a method for calculating the same quantities for the mixture under given conditions.

3. If 100 cubic inches of dry air, at temp. 60° Fahr. and pressure 30 in., weigh 31.0117 grains, prove that the weight in grains of a given volume of air at a given pressure and temperature is

$$W = \frac{5.375\ Vp}{460 + t}$$

4. Assuming the formula in (3) and taking the specific gravity of mercury as 13.596, show that the *relative volume* of steam (*s. g.* = ·622) at the pressure of P pounds to the square inch is given by the equation

$$Rel.\ Vol. = 37\frac{460 + t}{P}$$

5. Describe any experiment showing the *elasticity* of gases.

6. If a rectangular surface, having two opposite sides horizontal, be immersed in a liquid, the pressure on it is perpendicular to its surface, and equal to the weight of a mass of the liquid whose volume is the product of the rectangle into the depth of its centre of gravity below the surface of the liquid.

7. An astronomical telescope whose object glass is of 6 ft focal length and eye-glass of 1 inch focal length is used by a person of average sight to view an object 100 feet distant; find the distance between the glasses.

a. If used by a person whose least distance of distinct vision is 3 inches, find the distance between the glasses.

8. Draw a diagram showing the manner in which the image of a distant object is formed on the retina by a Galilean telescope.

9. Investigate a formula for finding the magnifying power of a pocket lens, and apply it when the focal length of the lens is $1\frac{1}{2}$ in., the distance of distinct vision being 10 inches.

10. Define the *dispersive power* of a body; and find it for fluor spar ($\mu = 1.434$), the refractive indices of the red and violet rays being 1.429 and 1.439 respectively.

11. Show that for a *convex* spherical mirror, the focal length is a mean proportional between the distances of the conjugate foci from the principal focus.

12. If Q and q be the points where the axis of a concave spherical mirror is cut by an incident, and the reflected ray respectively, prove that the distances of Q and q from the surface are to each other in the ratio of their distances from the centre.

THIRD YEAR.

MECHANICS.

WEDNESDAY, APRIL, 3RD:—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. A heavy particle is projected in a vacuum; prove the following rule for finding its velocity at any point of its trajectory:—

a. If or from a point vertically over the point of projection, and at a distance from it equal to the height due to the velocity of projection a line be drawn parallel to the horizon, the velocity at any point of the trajectory will be equal to that acquired by falling from the point of the parallel vertically over it.

2. A ball moving at the rate of 10 miles an hour impinges at an angle of 20° upon a plane, the common co-efficient of elasticity being ·24; find its direction and velocity after reflection.

3. Assuming the earth's equatorial radius to be 209 235 96 feet, and the force of gravity at the equator be 32.088, prove that the force of the earth's attraction is 289 times the centrifugal force at the equator.

4. Assuming only the formula for the length of a pendulum, calculate the effect produced in a day on the number of vibrations of a zinc seconds pendulum by a fall of temperature of 14° Fah., the ratio of the increase of length to the whole length for 1° Fah. being $\frac{1}{61200.}$

5. Assuming the earth to be a sphere, the component of the centrifugal force which tends to transport the materials of the earth's crust to the equator is

$$\frac{4\pi^2 R}{T^2} \sin l \cos l.$$

6. If a circle be drawn in a vertical plane, and from its highest point chords be drawn; the time occupied by a body in running down any chord is constant.

7. Find the space described between the fourth and seventh seconds by a falling body.

8. Give Newton's statement of the laws of motion, and explain the second.

9. What Power will be required in a Burton system of pulleys of the first kind, containing 4 moveable pulleys, to sustain a weight of 17 ton 12 cwt., neglecting friction, the rigidity of the cord, and the weight of the blocks?

10. Name the Mechanical Powers, and state any general principle by which the condition of equilibrium for each may be found.

11. Find the centre of gravity of a triangular plate and thence that of a polygon.

12. Prove that the work done in walking up an inclined plane is equal to the work done in walking along the base of the plane, plus the work done in lifting the weight of the body through the height of the plane.

B. A. ORDINARY EXAMINATION.

ASTRONOMY—OPTICS.

TUESDAY, APRIL 2ND :—MORNING, 9 TO 12.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Describe and account for the phases of Venus. Why does the position of maximum brightness not correspond to that in the case of the moon?

2. Describe a method of finding the height of a mountain in the moon. The moon's diameter being 2153 miles, and supposing the distance of a luminous summit from the boundary of light and darkness to be $\frac{1}{10}$th part of the moon's diameter, calculate the height of the mountain.

3. State the principle of the lunar method of finding the longitude of a place.

4. Define parallax and state the use of the correction. State and explain the effect of parallax on the apparent altitude of a heavenly body. Investigate a formula for calculating it.

5. The Zenith distance of the Pole seen from any place on the Earth's surface is equal to the co-latitude of the place.

α. What is the limit to the north polar distance of those stars which, at a particular place, never set.

6. State Kepler's Laws, and explain the application of them generally.

7. In a Newtonian telescope, the focal length of the object speculum is 3 feet; the focal length of the eye-glass is $\frac{1}{3}$ inch; and the distance of the eye-glass from the plane mirror is 3 inches; find the distance at which the plane mirror should be placed from the object speculum so as to view celestial objects. Explain the calculation.

8. Describe the simple microscope and the mode of finding its magnifying power.

9. A short-sighted person can read a book at the distance of $5\frac{1}{2}$ inches, and wishes to read it at 10 inches from his eyes; find the class of spectacles he must use and their focal length.

10. A convex lens of crown glass (dispersive power = ·036) of 1 inch aperture and 3 feet focal length is joined to a concave lens of flint glass (dispersive power = ·048) of the same aperture and 4 feet focal length; 1°. Prove that the combination will be achromatic; 2°. Find the focal length of the compound lens.

11. A concave lens of 6 inches focal length is placed 10 inches from a luminous point; find the conjugate focus. Draw a diagram illustrating the action of the lens on a pencil of rays coming from any one point of the object.

12. Investigate the formula connecting the positions of the conjugate foci for a concave spherical mirror.

B. A. ORDINARY EXAMINATION.

MECHANICS—HYDROSTATICS.

WEDNESDAY, APRIL 3RD;—MORNING, 9 TO 12.

Examiner, ...ALEXANDER JOHNSON, LL.D.

1. A heavy particle is projected in a vacuum; find the time of flight on a horizontal plane.

2. The number of vibrations daily of the same pendulum was found to be 85945 and 85933·83 in London and Paris respectively. From this calculate the difference of gravity in the two places as a fraction of its total amount. Prove any formula you employ.

3. Describe the method of Galileo for proving that gravity is a constant force.

4. If a force of 17 lbs. produce a velocity of 14 feet in a cubic foot of matter in one second, find the specific gravity of the matter.

5. A body suspended from a fixed point will not be in equilibrium unless the line joining the point of suspension with the centre of gravity be vertical.

6. State the law of Universal Gravitation. If a man weighing 150 lbs. on the earth were placed on the moon, calculate what his weight would be, assuming the radius of the moon as 1000 miles and its relative sp. gr. as .062.

7. In an air-pump where the volume of the receiver and leading-tube is three times that of the pump, calculate the number of strokes necessary to raise the mercury in the gauge to 25 inches, the barometer standing at 30.

8. Describe the safety-tube and explain its action.

9. The height of the cistern above the well, in the case of a suction and lifting pump, is 42 feet, the diameter of the piston $4\frac{1}{2}$ inches, the length of the handle of the pump 49 inches, and the distance of the fulcrum from the piston-rod $3\frac{1}{2}$ inches; calculate the force required to work the pump.

10. A cylindrical block of wood (sp. gr. = ·0551,) 6 inches in diameter and 1 inch in height, has a circular lead plate (sp. gr. = 11.35) of the same diameter attached to its flat surface, and the whole when put in water rests in equilibrium when totally immersed; find the thickness of the plate.

11. Describe the construction of the mercurial barometer, and state how it has been proved to measure the atmospheric pressure. What are the advantages of mercury over other liquids? What corrections must be applied to the observed height of the mercury?

12. Define the centre of pressure of a surface immersed in a liquid, and find it for a rectangular surface one of whose sides coincides with the level of the liquid.

B. A. ORDINARY AND THIRD YEAR.

EXPERIMENTAL PHYSICS:—HEAT—LIGHT.

WEDNESDAY, APRIL 3RD:—AFTERNOON, 2 TO 5.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Define the *Mechanical equivalent of heat* and describe any one method by which it was experimentally investigated. Give the "*equivalent*," according to the Fahrenheit and Centigrade scales respectively.

a. An iron ball at temp. 60° Fah. and having a velocity of 1500 feet a second strikes a target. Calculate the temperature to which it will be raised, assuming that the heat is equally divided between the ball and target, the specific heat of iron being 0.1138.

2. Equal quantities of ice, salt and water, each at 0° C. are mixed two and two together, thus forming three mixtures. State which will have the highest, and which the lowest temperature; giving reasons.

3. A pound of ice at 0° C. is placed in two pounds of water at 0°; required the weight of steam at 100°, which will melt the ice and raise the temperature of the mixture to 30°, the latent heat of water being 80 and that of steam 540, on the Centigrade scale.

4. When and why does a parabolic mirror reflect rays of light or heat coming from a distant body to the focus? Describe an experiment with two parabolic mirrors to verify the laws of reflection of heat.

5. Give Wells's *Theory of dew*, and state facts in support of it.

6. Describe the action that takes place in water when it is raised from the freezing to the boiling point, and state the *laws of ebullition*.

7. State the *Wave Theory of Light*, and describe the manner in which the lengths of the waves are calculated from the phenomena of Newton's rings —giving the method in detail.

8. State any experiment which contains the distinguishing principle of the *direct-vision* spectroscope, and describe this latter. Describe the method by which the spectra of various elements were thrown on the screen in the lectures. How was the *reversal of the sodium line* produced? Give the theoretical explanation of this.

9. What is the *punctum cæcum* in the eye? How may its existence be experimentally detected?

10. What is *plane polarized* light theoretically? In what way may we form an idea of the action that takes place when two plates of tourmaline crossed at right angles totally intercept the light at the place where they cross.

11. Account for *refraction* on the wave theory.

12. How is the unequal refrangibility of the different colours shown by Newton's experiment with *crossed prisms*.

HONOUR EXAMINATIONS.

FIRST YEAR.

GEOMETRY.

THURSDAY, APRIL 25TH:—MORNING, 9 TO 1.

Examiners..... { ALEXANDER JOHNSON, LL.D.
ARCHIBALD DUFF, M.A.

1. If a system of circles have a pole and polar in common, they shall have the same radical axis.

2. If two circles touch three others, the contacts being of the same kind, the radical axis of the two is the external axis of similitude of the three.

3. The polar of a given point, with respect to any circle of a co-axal system, will always pass through a fixed point.

4. Define a system of points in involution, and show that the anharmonic ratio of any four points is equal to that of their four conjugates.

5. Given the vertical angle of a triangle in magnitude and position, and the sum of the reciprocals of the sides; prove that the base always passes through a fixed point on the bisector of the vertical angle.

6. In any triangle the rectangle under the sides is equal to the rectangle under the perpendicular, from the vertex on the base and the diameter of the circumscribing circle.

7. Given the base and the sum of the squares on the sides of a triangle: find the locus of the vertex.

8. Describe a circle touching a given circle, passing through a given point and having its centre in a given straight line passing through this point; and point out the different solutions possible.

9. Divide a triangle into two equal parts by a straight line at right angles to one of the sides.

10. Two vertices of a triangle move on fixed straight lines, and the three sides pass through three fixed points, which lie on a straight line: find the locus of the third vertex.

a. Inscribe in a given triangle another, so that its sides shall pass through three given points in a straight line.

11. If through any point inside or outside a circle secants be drawn, the straight lines joining the extremities of the chords intersect on the polar of that point.

12. The four circles each self-conjugate to one of the four triangles formed by the sides of a quadrilateral, and the circle circumscribing the triangle formed by the three diagonals of the complete quadrilateral, form a system of five circles, which cut orthogonally the three circles described on the three diagonals, as diameters.

a. The straight line joining the middle points of the diagonals is the radical axis of the five circles.

FIRST YEAR.

ALGEBRA.—THEORY OF EQUATIONS.

FRIDAY, APRIL 26TH:—MORNING, 9 to 1.

Examiners..... { ALEXANDER JOHNSON, LL.D.
ARCHIBALD DUFF, M.A.

1. Find a series of fractions converging to $\sqrt{2}$.

2. Investigate a method for finding the probability that one of two individuals whose ages are known will be alive at the end of any number of years.

3. Find the number of words which can be formed by taking the 24 letters of the alphabet, 6 at a time, each word containing 2 vowels.

4. Apply Newton's method to find the root which lies between 0 and 1 of the equation

$$x^4 - 8x^3 + 12x^2 + 8x - 4 = 0.$$

5. Solve the equation:

$$x^4 - 6x^2 - 8x - 3 = 0.$$

6 Prove that the equation

$$x^7 - 2x^4 + x^3 - 1 = 0.$$

has at least four imaginary roots.

7. Remove the second term and solve the equation

$$x^3 - 18x^2 + 157x - 510 = 0.$$

8. Construct the general term of the expansion of $(x + a)^n$; and hence prove that when n is a positive integer, the co-efficients formed from the index, of any two terms equi-distant from the beginning and end are the same.

9. Given $y^3 - axy - b^3 = 0$, find y in a series of powers of x, stating carefully the theorem on which your operation is based.

10. (*a*) Shew that there is no solution in whole numbers for the indeterminate equation $49x - 35y = 11$; and (*b*) state and prove a general proposition covering this and like cases where the co-efficient s of x and y have a common factor not common to the absolute term.

11. Sum $(s-a) + (s-\overline{a+ar}) + (s-\overline{a+ar+ar^2}) +$ &c. to n terms.

12. Calculate by Horner's method the real roots of the cubic equation:—$x^3 + 10x^2 + 8x - 120 = 0$.

13. Solve the following equations which have two roots in common:—$x^4 - 2x - 7x^2 + 26x - 20 = 0$,
and $x^4 + 4x^3 - 2x^2 - 12x + 8 = 0$.

14. If the roots of the equation $x^3 + px^2 + qx + r = 0$ are in Geometrical Progression, $rp^3 = q^3$.

(*a*.) Hence solve the equation $x^3 - x^2 + 2x - 8 = 0$.

15. State and prove Descartes' rule of signs

SECOND YEAR.

ANALYTIC GEOMETRY.

THURSDAY, APRIL 25TH:—MORNING, 9 TO 1.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Taking the general equation of a conic, find the locus of the middle points of chords parallel to a given line.

2. Find the equation of a conic making given intercepts on the axes.

3. Through a fixed point P between two given straight lines a line is drawn cutting the given lines in the points L and K respectively; find the locus of a point Q on this line such that $P\,L = Q\,K$.

4. The equation of a conic referred to oblique axes inclined at an angle of 60° is

$$x^2 - 3\,x\,y + y^2 + 1 = 0;$$

transform the equation to the axes of the curve.

5. Prove the following expression for the normal to an ellipse in terms of the angle it makes with the axis major

$$\text{normal} = \frac{a\,(1 - e^2)}{\sqrt{1 - e^2\,sin^2\,a}}$$

6. The triangle formed by the tangent to an hyperbola and the two asymptotes has a constant area.

7. Find the condition that $lx + my = 1$ may touch

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1.$$

8. Given vertex and vertical angle of a triangle and rectangle under sides; if one base angle describe a circle, find the locus described by the other base angle.

9. Find the locus of a point, such that if it be joined to the vertices of a triangle, and perpendiculars to the joining lines erected at the vertices, these perpendiculars meet in a point.

10. Find the equation of the polar of a given point with regard to a conic expressed by the general equation.

11. Given the base of a triangle and that one base angle is double the other find the locus of the vertex.

12. Find the angle contained by the lines represented by the equation

$$x^2 - p\,x\,y + q\,y^2 = 0.$$

SECOND YEAR.

CALCULUS—TRIGONOMETRY.

FRIDAY, APRIL 26TH :—MORNING, 9 TO 1.

Examiner.....ALEXANDER JOHNSON, LL.D.

1 Define the maximum and minimum values of a function of a single variable, and state and prove the rules for finding them.

a. Apply them to the function.

$$u = x^3 - 7x^2 + 8x + 32.$$

2. Find the value when, $x = 0$, of the fraction.

$$\frac{e^x - e^{\sin x}}{x - \sin x}$$

3. Expand $\tan^{-1}(x + h)$ by Taylor's theroem.

4. If $u = x^x$, find $\frac{d^3 u}{dx^3}$

5. If $u = z\,v$ prove

$$d^n u = z\,d^n v + n\,dz\,d^{n-1} v + n\,\frac{(n-1)}{2} d^2 z\,d^{n-2} v + \&c.$$

6. If $u^3 - 3ux^2 + x^3 = 0$; find $\frac{du}{dx}$.

7. Find the formula of reduction for

$$\int_x \frac{x^m}{(1+x^2)^n}.$$

8. Integrate

$$\int_x \frac{x^2}{a + bx + cx^2}; \quad \int_x \frac{x^2}{(x+2)^2 (x+4)^2}.$$

9. Integrate

$$\int_x x^3 \sqrt{1+x^2}; \quad \int_x \frac{1}{\sqrt{x^2+a^2}}; \quad \int_x \frac{1}{\sqrt{x^2+x+1}}.$$

10. Integrate

$$\int_x \frac{\log x}{(1+x)^2}; \quad \int_x \frac{1}{\sin x}; \quad \int_x e^x . x^4.$$

11. Find the number of different values comprised in the function $\cos \frac{2r\pi + \theta}{n}$ when successive integral values are assigned to r.

12. If m be odd prove that

$$2_m \cos^m \theta = 2 \cos m\theta + 2m \cos (m-2)\theta + 2\,\frac{m(m-1)}{1.2} \cos (m-4)\theta + \&c.$$

and find the number of terms.

13. Define a logarithm and prove that in the Napierian system
$$log\,(1+y) = y - \tfrac{1}{2}y^2 + -\tfrac{1}{3}y^3 - \&c.$$
14. In a spherical triangle
$$tan\,\tfrac{1}{2}(A+B) = \frac{cos\,\frac{1}{2}(a-b)}{cos\,\frac{1}{2}(a+b)}\,cot\,\tfrac{1}{2}\,C.$$
15. Prove that if E be the spherical excess
$$cot\,\tfrac{1}{2}\,E = \frac{cot\,\frac{1}{2}\,a\,cot\,\frac{1}{2}\,b + cos\,C}{sin\,C}$$
16. In a spherical triangle $a = 24°\,4'$, $b = 30°$, $A = 36°\,8'$ find the angle B.

THIRD YEAR.

ASTRONOMY.—OPTICS.

THURSDAY, APRIL 25TH:—MORNING, 9 TO 1.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. If a' and l be the right ascension and longitude respectively of the real sun at any time t, ω the obliquity of the ecliptic, a the right ascension of the fictitious sun, and μ a function of the longitude such that $l = a + \mu$, prove the expression for the Equation of time,
$$a' - a = \mu - tan^2\frac{\omega}{2}\,sin\,2\,l + \tfrac{1}{2}\,tan^4\frac{\omega}{2}\,sin\,4\,l,\ \&c.$$

2. Given an approximate value of the obliquity of the ecliptic, deduce and explain a formula for finding it more accurately, viz:
$$\omega - \delta = \frac{\frac{tan^2\,a'}{2}\,sin\,(\omega+\delta)}{sin\,1''}$$

3. Show that the constant of refraction may be determined from observations on two circumpolar stars.

4. Assuming that the aberrations, in latitude and longitude respectively, of a fixed star, are
$$a\,sin\,l\,sin\,D \text{ and } \frac{a\,cos\,D}{cos\,l}$$
where l is the latitude of the star, D the difference of longitude of the sun and star, and a a constant, prove that the apparent place of the star describes an ellipse in the course of a year about the true place.

5. Find when Venus is brightest, neglecting the eccentricity of her orbit.

6. In an orbit of very great eccentricity find the radius vector corresponding to a given value of the true anomaly.

7. Find the azimuth of a star whose declination is 16° 13′ N. at a place whose latitude is 40° 42′ N. when the star is three hours east of the meridian.

8. Calculate the parallax of Mars for an altitude of 24°, if his horizontal parallax be 10″.

9. Rays diverging from a point at a given depth under water proceed into the air, show that the caustic formed by the refracted rays is the evolute of an ellipse.

10. When a ray of white light is refracted through a prism in a principal plane, find the dispersion of two colours of given refractive indices.

(*a*) If the ray subsequently pass through a second prism, find the condition of achromatism.

11. Find the diameter of the circle of chromatic aberration of a pencil refracted directly through a thin lens.

12. Given the indices of refraction from air to water and from air to glass, state and prove the theorem by which the index from glass to water may be found.

THIRD YEAR.

MECHANICS—HYDROSTATICS.

FRIDAY, APRIL 25TH :—MORNING, 9 TO 1.

Examiner, ... ALEXANDER JOHNSON, LL.D.

1. If X, Y, Z be the rectangular components of a force or forces tending to fixed centres and being functions of the distances from these centres,

$$X\,dx + Y\,dy + Z\,dz$$

is a complete differential.

2. Find the differential equation of the path of a particle acted on by a constant force parallel to a fixed line, when projected from a given point in a given direction with a given velocity, and moving in a uniform medium whose resistance varies as the square of the velocity.

3. From Kepler's first two laws show that planets are attracted to the sun by a force varying inversely as the square of the distance.

4. Determine the motion of a particle acted on by a force in its line of motion, the force varying directly as the distance of the particle from a fixed point in the line.

5. Two particles are projected from the same point, at the same instant, with given velocities and at given angles of elevation; find

the time which elapses between their transits through the other point which is common to both their paths.

6. Two fine strings, slightly elastic, are fastened to the middle points of the sides of a uniform rectangular board, thus crossing the board parallel to its sides, and intersecting in its centre. Supposing the board to be suspended from the intersection of the strings, find the distance at which it will hang below the point of suspension.

7. A right cone is placed on its base upon a rough inclined plane, the inclination of which is gradually increased; find the condition that a motion of rolling and of sliding may take place simultaneously.

8. Find the centre of gravity of the portion of the area of the curve $y = \sin x$, between $x = 0$ and $x = \pi$.

9. Find the centre of gravity of the frustum of a pyramid formed by parallel planes.

10. Find the centre of pressure of a rectangular surface immersed in a liquid, two sides being horizontal.

11. Investigate a formula for the determination of heights by the barometer, taking the variation of gravity into account.

12. A sphere is just filled with a homogeneous fluid; find the resultant of the pressures upon either of the hemispheres into which it is divided by a vertical plane.

13. A globe 2 feet in diameter floating in water is half immersed; find its weight.

14. A spherical bubble composed of matter whose sp. gr. is s, and filled with gas of sp. gr. s', just floats in air of sp. gr. a; prove that the thickness of the bubble is $\left(\sqrt[3]{\frac{s - s'}{s - a}} - 1\right) \times$ internal radius.

ENGLISH, RHETORIC AND HISTORY.

FIRST YEAR.

ENGLISH LITERATURE.

WEDNESDAY, APRIL 10TH:—MORNING, 9 TO 12.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Mention the different periods into which the history of England is divided and the different periods into which the history of the English language is divided.

2. Give some account of the three Anglo-Saxon poems composed before the beginning of the emigrations to England.

3. Enumerate the principal writers in Anglo-Saxon prose.

4. What is said to have been the origin of Latin Rhymes? Describe the Irregular Latin literature of the Norman times.

5. Give a particular account of the six French romances of the Arthurian class.

6. [1]Mention the several groups into which the languages spoken in Modern Europe are distributed; [2] to the subdivision of what group is the Anglo-Saxon to be referred?

7. Describe the places on the Continent of Europe whence the Anglo-Saxon invaders of Great Britain proceeded, and the parts of England that the several divisions of them successively occupied.

8. Give an outline of one of the Canterbury Tales of Chaucer.

9. Give the substance of the remarks on the speech of the South-Eastern counties of Scotland in the fourteenth century.

10. In what way did the poetry of the Troubadours exert some influence on the poetical literature of England?

11. Give the substance of the critical remarks on the poetical productions of Layamon.

12. Mention the principal writers of the Allegorical School during the middle ages.

13. Give some account of the works of the Scottish poets, John Barbour, Gavin Douglas and William Dunbar.

14. Show that the peculiarities of structure and idiom of the English language are essentially Anglo-Saxon.

15. Mention some of the special advantages that our language possesses from the Teutonic elements of its vocabulary.

INTERMEDIATE EXAMINATION.

ENGLISH LITERATURE.

THURSDAY, APRIL, 11TH :—AFTERNOON, FROM 2 TO 5

Examiners,..... { VEN. ARCHDEACON LEACH, D.C.L.
REV. A. N. MCQUARRIE, M.A.

1. What languages were used in Literature during the Anglo-Saxon period?

2. Describe the natural development of literary cultivation among a people, and show wherein the development of Anglo-Saxon differs from this.

3. Give the substance of what is said regarding the writings of Cædmon.

4. Mention the principal events that mark the 13th century as a decisive epoch in the constitutional history and intellectual progress of England.

5. Give a short biographical sketch of Geoffrey Chaucer; give some account of the Canterbury Tales.

6. Give some account of the principal metrical works in Scotland in the *living tongue* during the 14th century.

7. Mention the different classes of English words that are of Anglo-Saxon origin.

8. State the various conjectures of philologers respecting the Scandinavian element in the English language.

9. Give an account of the languages spoken in Southern and in Northern France about the close of the Dark Ages.

10. Mention what is said of Geoffrey Gaimar and Richard Wace.

11. Which are the two writers whose works are said to present good specimens of the semi-Saxon stage of our tongue? Describe their works.

12. Give the substance of the remarks on the origin of the Old English Drama.

13. Write what you remember in regard to the Anglo-Saxon Chronicle.

14. Describe the process, generally, by which the Anglo-Saxon passed into the semi-Saxon.

15. Mention the most noticeable changes in etymology and vocabulary that make the difference between the Middle English and the previous stage in the history of the language.

THIRD YEAR.

RHETORIC.

THURSDAY, APRIL, 11TH:—AFTERNOON, 2 TO 5.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Reply to the prejudice that an appeal to the feelings or active powers is a dishonest artifice.

2. Explain the different modes of procedure when the object is to convince by reasoning and to persuade by exciting the feelings.

3. Show how the faculty of imagination may be rightly employed for the production of persuasion.

4. What is the best arrangement, generally, of the different parts of a discourse?

5. Give the substance of the remarks on the subject of Diversion of Feelings.

6. What is the proper course of the speaker whose object it is to counteract party spirit and the violence of the prejudices that spring from it?

7. Why is it difficult or impossible, as it is said, to attain complete perspicuity of style?

8. State and explain the rules to be observed for the attainment of perspicuity in regard to Conciseness and Prolixity.

9. Which are the best modes of Repetition to be employed?

10. What is recommended in regard to the use of Saxon words and those of French derivation?

11. Show that Perspicuity is not inconsistent with ornament.

12. Give the substance of what is said on the subject of Sophistry.

13. Give an account of the cases in which perspicuity is not aimed at.

14. Give the substance of the remarks on the display of eloquence.

15. Show that abstract and general terms are less efficacious for energy of style than singular or more specific terms.

16. Give the principal rules to be observed in the use of Metaphors.

17. Give the principal rules to be observed in the choice of Epithets.

18. Explain what is meant by suggestive style?

19. What is meant by the natural order of words? Point out the arrangements that are conducive to energy of expression.

20. Show the particular advantages, in regard to energy, that the English language possesses from its peculiar structure.

B. A. ORDINARY EXAMINATION.

ENGLISH LITERATURE (ANGLO-SAXON).

FRIDAY, MARCH 29TH :—AFTERNOON, 2 TO 5.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Give a synopsis of the declension of Nouns.
2. Decline the Adjective Pronouns "Min," "thin," "ure."
3. Give a synopsis of the declension of Adjectives, definite and indefinite.
4. Mention the Anglo-Saxon Cardinal Numbers up to one hundred.
5. Conjugate the verbs "Weson," "habban," "Wyllan."
6. How are Adjectives and Adverbs compared?
7. Mention the principal Prepositions that govern the dative and those that govern the genitive and dative.
8. Translate the following passage, and give a minute grammatical analysis of the first sentence :

Heo tha seo cw'en Dameris mid mycelre gnornunge ymb thaes cyninges slege hyre suna thencende waes, hu heo hit gewrecan mihte, and thae eac mid daedum gelaeste, and hyre folc on twa todaelde, aegther ge 'wifmen ge waepned-men, forthan the thaer 'wifmen feshtath swa same swa waepned-men. Hio mid thaem healfan daele beforan tham cyninge farende waes, swilce heo fleonde waere, oth hio hine gelaedde on 'an mycel slaed, and se healfa dael waes Ciruse aefter-fyligende. Thaer wearth Cyrus of slegen and twa thusend mauna mid him. Leo cw'en het tha tham cyninge thaet heafod of-aceorfan and hewyrpan on 'anne cylle, se waes afylled mannes blodes, and thus cwaeth, thu the thyrstende waere mannes blodes xxx wintra, drinc nu thine fylle.

THIRD YEAR EXAMINATION FOR HONOURS.

ENGLISH (LANGUAGE).

WEDNESDAY, APRIL 17TH :—MORNING, 9 TO 12.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Explain the two theories put forth to account for the origin of language.
2. Words are said to be the guardians of thought; show the significance of this.
3. Give the substance of what is said of the agreement between names and things.
4. Mention some of the examples adduced in explanation of what is termed the poetry of language.

5. Give a summary account of Dr. Trench's evidence from language, that man has "fallen from the heights of his original creation."

6. Give the substance of the remarks on random etymologies and accidental coincidences.

7. Show how words often embody past customs.

8. Give some examples of proper names becoming new words.

9. Give some examples of new words formed through the splitting of single words into two or more.

10. Show how one word may be said to grow into two by change of accent.

11. Explain the error of supposing that "S" of the genitive is a contraction of "his."

12. Give examples of words once generic having become specific in signification.

ENGLISH (LITERATURE).

WEDNESDAY, APRIL 17TH:—AFTERNOON, 2 TO 5.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Mention the characters in the Paradise Lost that admit of examination, and show by some examples the consistency between those characters and the sentiments attributed to them.

2. Give an outline of the subject-matter (the Argument) of the Fourth Book.

3. What peculiar advantage has the Paradise Lost in the nature of its subject?

4. Mention the two episodes contained in the poem.

5. What is the concurrent opinion of critics in regard to the versification of the poem?

6. (1) To what class of practical composition is the Lycidas to be referred? (2) Say how far the sentiments and images employed are appropriate to the subject. (3) What constitutes the charm of the poem? (4) What of the versification?

7. What was Milton's design in the compositions "Il Penseroso" and "L'Allegro"?

8. When was the "Annus Mirabilis" of Dryden written? Mention the historical events referred to, and describe, with critical remarks, the versification he employs in the poem.

9. Relate the historical circumstances on which the Epistle of Eloise to Abelard is founded, with critical remarks to show in what the particular merits of the poem consist.

10. Give the substance of Bacon's Essay on the subject of Judicature.

B. A. ORDINARY EXAMINATION.

ENGLISH LITERATURE (MARSH'S LECTURES).

THURSDAY, APRIL 11TH :—AFTERNOON 2 TO 5 P.M.

Examiner,..... .....VEN. ARCHDEACON LEACH, D,C.L.

1. Describe the four Anglian kingdoms that arose from the invasions of the Angles, and the parts of England occupied by the Saxons.

2. Give the divisions and subdivisions of the different Teutonic languages.

3. Show that the Anglo-Saxon resulted from the fusion of many separate elements.

4. Mention the chief authorities for the history of the Anglo-Saxon conquest of England.

5. Show that the changes that took place in the grammatical forms of our language were materially due to external causes.

6. Show that the study of the derivation of words used in their simple form and literal sense is generally of little use in affording a just conception of their meaning. What of compound words ?

7. What reasons may be assigned for the comparatively late cultivation of English literature ?

8. Give the substance of the remarks on the subject of a scientific nomenclature.

9. State the different hypotheses given to explain the origin of inflectional forms.

10. Give the substance of the remarks on the metrical system of the classical languages and that of modern literature.

11. On what grounds is the use of double and triple rhymes held to be objectionable ?

12. Show what advantages English versification might derive from the revival of certain Anglo-Saxon inflections.

13. How is Rhythm described ? How is Metre defined ?

14. Describe the form and peculiar effects of Alliteration.

15. Describe the coincidence of sound denominated Half-Rhyme, and give examples of the forms called Assonance and Annomination.

ENGLISH HISTORY, (HUME).

SATURDAY, APRIL 20TH:—AFTERNOON 2 TO 5 P.M.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Give an outline of the life of Dunstan.

2. Give a summary account of the history of England from the accession of Harold II. to the Conquest.

3. Mention the principal incidents in the quarrel of John with the Court of Rome.

4. Give a historical account of the Court of Star Chamber.

5. Mention the principal events in the history of Archbishop Cranmer.

6. What was James I.'s title to the Crown of England.

7. Give an outline of the history of Sir Walter Raleigh.

8. Give an account of the fortunes and fate of the Duke of Buckingham.

9. Mention the principal points in Hume's account of the trial of Charles I.

10. Give an account of the Act of Uniformity and of the Conventicle Act.

11. What was the Triple Alliance, and how did Charles II. conduct himself in reference to it?

12. Give the history of Monmouth's Conspiracy, and of the fate of the principal persons concerned in it.

HISTORY (GIBBON).

SATURDAY, APRIL 20TH:—MORNING.

Examiner.....VEN. ARCHDEACON LEACH, D.C.L.

1. Enumerate the provinces of the Roman Empire during the first and second centuries.

2. Describe the system of the Imperial Government as it was instituted by Augustus.

3. Mention the reasons for the institution of the Prætorian Guard by Augustus, and the political consequences of the act.

4. Give an outline of the history of the Naval expeditions of the Goths in the thirteenth century.

5. Give the substance of Gibbon's remarks on the nineteen Tyrants that started up in the reign of Galienus.

6. Recount the circumstances of the abdication of Dioclesian, and describe his character.

7. Mention the principal events in the life of Athanasius.

8. Give the history of the crossing of the Danube by the Goths, and of the battle of Adrianople.

9. Give the history of the Code, the Pandects and the Institutes of Justinian, and mention the several parts into which the subject-matter of the Institutes is divided.

10. Give the substance of what is said in regard to the Pontificate of Gregory the Great.

11. Mention the time and the attending circumstances of the confirmation of the Pope's temporal dominion.

12. Give an account of the victory of Charles Martel over the Saracens.

ENGLISH (HISTORY).

TUESDAY, APRIL 23RD :—MORNING, 9 TO 12.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Mention the principal measures by which the English were oppressed by William the Conqueror in the carrying out of his tyrannical policy.
2. Point out the difference between the feudal policy in England and France.
3. What were the measures adopted by William for the preservation of public peace?
4. Mention, with historical notices, the three essential principles of English Government established during the reign of Edward III.
5. Relate the events connected with the deposition of Richard II., and show how the act of deposition may be justified.
6. Explain the threefold title of Henry VII. to the crown.
7. Give an outline of the story of Lambert Simnell.
8. What were the qualifications of the privileges of Santuary that Henry obtained from the Pope?
9. Give the substance of what Bacon says in regard to the authority of the Star Chamber and White-Hall.
10. Enumerate the laws passed in the early part of Henry's reign, for which he is praised by Bacon as "the best lawgiver to this nation after Edward I."
11. Describe summarily the adventures of Perkin Warbeck.
12. Give the substance of the account of the marriage of James V. of Scotland and Margaret the King's daughter.

B. A. EXAMINATION FOR HONOURS.

LANGUAGE.

APRIL 11TH :—AFTERNOON, 2 TO 5.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. State the reasons given to show the relative importance of the different kinds of evidence by which the origin of a language may be attested.
2. Upon what grounds has it been argued that part of the population of Britain, when the country first became known to the Romans, spoke not a Celtic but a Germanic language?
3. State the evidence for the generally received conclusion that the parts of England referred to must at one time have been in possession of a Celtic population.

4. Mention, with dates, the principal facts of the Roman occupation of England.

5. Give the commonly accepted account of the Anglo-Saxon invaders of Britain, and say which of the continental dialects most resembles the Anglo-Saxon.

6. Mention the historical cases adduced to show the results of a competition of languages.

7. How did the English tongue come to partake so largely of a Norman French element?

8. Mention some of the principal grammatical pecularities in w hich the Anglo-Saxon differs from the present English.

9. To what period does Tyrwhitt refer especially the introduction of French words into the English vocabulary?

10. Mention the different periods into which the history of the English Language is divided.

11. How are the apparent irregularities and deficiencies in Chaucer's versification to be accounted for?

12. What is supposed to be the most probable origin of Rhyme in English poetry?

13. Mention the different kinds of verse used by Chaucer.

HISTORY.

TUESDAY, APRIL 23RD:—MORNING, 10 TO 1.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Give an outline of the transactions of Edward I. in Scotland.

2. When was the first statute of Præmunire passed? Why so designated, and what were its principal provisions?

3. How did the wars of the Roses originate, and what effects for good or evil are usually ascribed to them?

4. Mention the principal statesmen and literary men of the time of Queen Elizabeth.

5. Give a brief account of the Earl of Somerset, Sir Thomas Overbury and the Duke of Buckingham, James I.'s time.

6. Enumerate the principal arbitrary acts of Charles I. that brought about the civil war in England.

7. What was the condition of the Scots at the outbreak of the Rebellion in England, and what made them incline to the Parliamentary side?

8. What was the fate of Hampden, and give the substance of Clarendon's remarks on his private and public character.

9. Give some particulars of the life and character of Lord Falkland.

10. What success had the Committee which the parliament sent to ask aid from the Scots, and by what means was that success obtained?

11. Describe Charles' flight from Oxford, and state the reasons that made it necessary.

12. What divisions in the army disturbed the parliament at Westminster and introduced confusion into their councils?

13. Describe the state of affairs in England from the landing of the Prince of Orange to the departure of James II.?

14. Give a historical account of the convocation of the church of England.

15. Give some account of the rise and progress of British power in India.

LITERATURE.

TUESDAY, APRIL 23RD:—AFTERNOON, 1 TO 5.

Examiner,.....VEN. ARCHDEACON LEACH, D.C.L.

1. Mention the principal facts in regard to the life of Shakespeare.

2. How may the absence of all evidence of his having claimed the plays as his own productions or property be accounted for.

3. Show that the extent of his scientific knowledge must have been great, considering the age in which he lived.

4. What estimate would you make, from internal evidence, of his classical acquirements?

5. Is the discrepancy between the extraordinary merit of his productions and the received accounts of his course of life accounted for by the supposition of transcendent genius?

6. Give a general outline of the story of Julius Cæsar.

7. Criticise the plan of the play, the characters introduced, the moral tendencies and particular qualities that give to the play the special interest it commands.

8. Relate the story of one or other of the Canterbury Tales of Chaucer.

9. Mention the principal rules given by Tyrwhitt in regard to the versification of Chaucer.

10. Give the substance of Dr. Craik's remarks on the allegorical form o Spenser's Fairy Queen.

LOGIC AND MENTAL AND MORAL PHILOSOPHY.

INTERMEDIATE EXAMINATION.

LOGIC.

WEDNESDAY, APRIL 10TH:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Distinguish Categorematic and Syncategorematic words.

2. In the following sentence state what words are Categorematic, what Syncategorematic: "We are such stuff as dreams are made of."

3. Distinguish Positive, Negative and Privative Terms, giving an example of each.

4. (*a*) What is meant by Logical Division and Logical Definition respectively? (*b*). State the Rules of each.

5. Distinguish the three constituent parts of each of the following propositions:

(*a*). "Uneasy lies the head that wears a crown."

(*b*). "That man is the real coward who fears to do what is right."

6. Convert the following Propositions:—

(*a*). Not a life was lost.

(*b*). Some propositions are self-evident.

(*c*). The whole of these statements are questionable.

(*d*). Some of his assertions are not credible.

7. (*a*) How many Terms, how many Propositions, must there be in every Syllogism? (*b*) What are they severally named? (*c*) Why are they so named?

8. (*a*). What is meant by the Mood, what by the Figure, of a Syllogism? (*b*) Distinguish the different Figures.

9. (*a*) What conclusions alone can be drawn in the Second Figure; what, in the Third? (*b*) Explain the reason.

10. (*a*) To what Figures do Felapton, Baroko, Camestres, respectively belong? (*b*) Explain the formation of these names.

11. State the following argument in the Third Figure, and reduce it to the First: "Inasmuch as sponges are animals, some animals are not capable of locomotion."

12. Analyse the following Sorites into its constituent syllogisms: "God is a Being of perfect goodness; a Being of perfect goodness will not inflict needless pain on His creatures; He who will not inflict needless pain on His creatures must have some purpose in their present sufferings; therefore God must have some purpose in the present sufferings of His creatures."

13. Distinguish (*a*) the two main divisions of the Fallacies, (*b*) the two subdivisions of each.

14. Explain the Fallacia Accidentis, illustrating by an example.

15. "In an unsettled controversy like this it is possible that the opinion of A may be true, though it is just as likely that the truth may be found in that of B. The same may be said with reference to the opinion of C and that of D. All their opinions may, therefore, be equally true." Explain the nature of this Fallacy, and name the class to which it belongs.

THIRD YEAR.

MORAL PHILOSOPHY.

WEDNESDAY, APRIL 10TH:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

I. LECTURES.

1. Distinguish the different factors of the Moral Consciousness.

2. Show (*a*) that the quality, which is regarded as making an action good, varies in different minds, (*b*) that there is one quality, to the recognition of which all developments of the Moral Consciousness tend.

3. (*a*) State the common principle of all Epicurean theories. (*b*) Distinguish their different forms.

4. (*a*) State the formula of Utilitarianism. (*b*) Define the different qualities which must be taken into account in measuring the quantity of pleasures. (*c*) Discuss the possibility of such measurement.

5. (*a*) Discuss the propriety of instituting a separate class of Duties to God. (*b*) Explain the position which should be assigned to the so-called Duties to God in a philosophical classification.

6. Enumerate the Duties of Justice which the Individual owes to the State.

7. (*a*) Define Right. (*b*) Classify Rights. (*c*) Explain how Rights are first acquired; how, transferred.

II. STEWART'S OUTLINES.

1. (*a*) Define Active Power. (*b*) Classify the Active Powers. (*c*) Which are implanted; which, rational?

2. Show that the Moral Faculty is not (*a*) resolvable into Self-love, or (*b*) originated by education. (*c*) Account for the discrepancies in the Moral Judgments of mankind.

3. State (*a*) the principal theories of modern times on the origin of Moral Notions, (*b*) Stewart's own theory.

4. (*a*) Name the Auxiliary Principles which co-operate with Virtue. (*b*) What is the proper object of Ridicule? (*c*) Explain the rank which the Sense of the Ridiculous holds in the human constitution.

5. (*a*) State the Argument from Final Causes for the existence of Deity. (*b*) Distinguish its Major and Minor Premises. (*c*) Explain the different treatment which each has received in ancient and in modern times.

6. (*a*) Distinguish Moral and Physical Evils. (*b*) How can the origin of Moral Evil be explained in harmony with the Benevolence of God?

7. (*a*) State the various theories on the Sovereign Good. (*b*) Which is Stewart's own doctrine? (*c*) Point out some mental qualities which have no connection with moral desert, but are necessary to ensure happiness.

B. A. ORDINARY EXAMINATION.

STEWART'S OUTLINES OF MORAL PHILOSOPHY.

WEDNESDAY, APRIL 10TH :—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. (*a*) Define Active Power. (*b*) Classify the Active Powers. (*c*) Which are implanted; which, rational?

2. (*a*) Distinguish the Desires. (*b*) Enumerate the most important of them.

3. Show that the love (*a*) of Liberty, (*b*) of Tranquillity, (*c*) of Virtue, is derived partly from the love of Power.

4. (*a*) Define Self-love, and (*b*) distinguish it specially from Selfishness.

5. Show that the Moral Faculty is not (*a*) resolvable into Self-love, or (*b*) originated by education. (*c*) Account for the discrepancies in the Moral Judgments of mankind.

6. State (*a*) the principal theories of modern times on the origin of Moral Notions, (*b*) Stewart's own theory.

7. (*a*) Name the Auxiliary Principles which co-operate with Virtue. (*b*) What is the proper object of Ridicule? (*c*) Explain the rank which the Sense of the Ridiculous holds in the human constitution.

8. State Clarke's *a priori* argument for the existence of Deity.

9. (*a*) State the Argument from Final Causes. (*b*) Distinguish its Major and Minor Premises. (*c*) Explain the different treatment which each has received in ancient and in modern times.

10. What *a priori* presumption is there in favour of the Benevolence of God?

11. (*a*) Distinguish Moral and Physical Evils. (*b*) How may the origin of each be explained in harmony with the Benevolence of God?

12. (*a*) What are the two sources of the evidence for a Future State? (*b*) Estimate their comparative force.

13. Classify the Duties to our Fellowmen.

14. Explain (*a*) the ambiguity in the words Right and Wrong, (*b*) the distinction introduced to remedy the ambiguity.

15. (*a*) State the various theories on the Sovereign Good. (*b*) Which is Stewart's own doctrine? (*c*) Point out some mental qualities which have no connection with moral desert, but are necessary to ensure happiness.

B. A. ORDINARY EXAMINATION.

MURRAY'S OUTLINE OF HAMILTON'S PHILOSOPHY.

THURSDAY, APRIL 11TH :—AFTERNOON, 2 TO 5.

Examiner,.....J. CLARK MURRAY, LL.D.

1. (*a*) Explain the origin of the term, Philosophy. (*b*) Define its present restricted sense. (*c*) Explain the reason of the restriction.
2. Explain why Consciousness cannot be defined.
3. State the special conditions of Consciousness which are undisputed.
4. How far does the testimony of Consciousness admit of doubt?
5. Classify the phenomena of Consciousness.
6. (*a*) Distinguish Sensation Proper and Perception Proper. (*b*) What is the law of their relation? (*c*) What, according to Hamilton, is the sole object of Perception Proper?
7. Explain the distinction in the qualities of Body, showing its correspondence with the distinction between Sensation Proper and Perception Proper.
8. Give a detailed classification of the Primary qualities of Body.
9. (*a*) What is meant by Latent Modifications of Mind? (*b*) State, in outline, the arguments for their existence.
10. Give an analysis of the Productive Imagination.
11. What are the Organs of Imagination?
12. What are the Primary Acts of Comparison which are involved in all knowledge?
13. State the various theories on the question of the *Primum Cognitum*.
14. Classify the Conditions of Positive Thought.
15. State Hamilton's theory of Causality.

EXAMINATION FOR HONOURS.

THIRD YEAR.

HISTORY OF ANCIENT PHILOSOPHY.

TUESDAY, APRIL 16TH :—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D

1. (*a*) In what colonies did Greek speculation originate? (*b*) Describe the circumstances of these colonies which were favorable to intellectual activity. (*c*) State the general drift of these early speculations.
2. (*a*) What were the colonies in which Pythagoreanism took root? (*b*) Describe the circumstances of these colonies which called it forth. (*c*) Describe the Pythagorean society in its various aspects. (*d*) Explain the fundamental principle of the Pythagorean philosophy.

3 Contrast the philosophical theories of the Eleatics and Heraclitus.

4. Explain the general drift of the famous arguments of Zeno, the Eleatic.

5. (*a*) With whom did the doctrine of Four Elements originate? (*b*) Compare it with the doctrines of Anaxagoras and Democritus regarding Elements.

6. What explanation may be given of the motives of Aristophanes and the accusers of Socrates, in their attacks upon his character?

7. Describe the relation of the Sophists (*a*) to the earlier Greek philosophers, (*b*) to the general life of their time. (*c*) Name the first teacher who is said to have borne the distinctive title of Sophist. (*d*) State his speculations on Cognition and Morality.

8. Describe (*a*) the personal character of Aristippus, (*b*) the fundamental principle of his Ethics, (*c*) the modifications of that principle by the most celebrated adherents of his school.

9. Sketch the Ethics of Plato, in connection specially with is theory (*a*) of the Highest Good, (*b*) of the Virtues, (*c*) of the State.

10. (*a*) Distinguish the four Aristotelian Principles or Causes. (*b*) Show that they are reducible to two.

11. (*a*) Explain the origin of the name Academy. (*b*) Distinguish the different periods in the history of the Academy.

12. (*a*) Explain the origin of the name Stoic. (*b*) Who was the founder of the school so named? (*c*) Sketch the Ethics of the school, showing ite connection with their Physics.

THIRD YEAR.

THOMSON'S OUTLINE OF THE LAWS OF THOUGHT.

THURSDAY, APRIL 25TH:—AFTERNOON, 2 TO 5.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Distinguish Intuitions and Conceptions.

2. Distinguish (*a*) the three powers of a Conception, (*b*) the three processes which correspond to them.

3. (*a*) Describe Aristotle's Predicable Classes. (*b*) To what are they reduced by Thomson?

4. Explain the common view of the Relation of Judgments.

5. (*a*) Give Thomson's Table of Judgments. (*b*) Compare it with the common table and with Sir W. Hamilton's.

6. Distinguish Explicative and Ampliative Judgments, giving an example of each.

7. Distinguish Mediate and Immediate Inference.

8. (*a*) Why does Thomson recognise only one pair of Contradictories in his Square of Opposition? (*b*) What are Inconsistent Propositions?

9. Explain what is meant (*a*) by the Figure of a Syllogism, (*b*) by an Unfigured Syllogism.

10. Give Thomson's reasons for holding that the distinction of Figures is not an arbitrary invention, but a true account of what takes place in the mind.

11. State the special Canon of each Figure.

12. Give Thomson's reason for rejecting the Fourth Figure.

13. Distinguish the two forms of the Sorites.

14. Define Prosyllogism and Episyllogism.

B. A. HONOURS FOR EXAMINATION.

MENTAL AND MORAL PHILOSOPHY.

FRIDAY, MARCH 29TH :—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D

I. PLATO'S THEÆTETUS.

1. Discuss, in special reference to the Theætetus, how far the alleged occasions of the Platonic dialogues may be considered historical.

2. Explain the precise drift of the question discussed in the Theætetus.

3. Trace the general course of the discussion, showing how the later answers to the question discussed arise from the failure of the preceding.

4. Explain the connection (*a*) between the doctrines of Protagoras and Heraclitus, (*b*) between these doctrines and the first which is proposed by Theætetus.

5. Show that some of the objections to the doctrine of Protagoras, which are put into the mouth of Socrates, overlook an important qualification of the doctrine.

6. Wherein does Plato anticipate, in this dialogue, the doctrine of the *a priori* factors of cognition?

II. MEDLÆVAL PHILOSOPHY.

1. (*a*) Give a brief analysis of the *De Consolatione Philosophiæ*. (*b*) Describe the position of the author in the history of philosophy.

2. (*a*) What was the nature of the controversies in the Eastern Empire previous to the advent of Mahomet? (*b*) Describe the influence of Mahometanism upon the East.

3. (*a*) What was the period of Joannes Scotus Erigena? (*b*). Give a brief analysis of his great work.

4. (*a*) Describe the position of the Normans in the eleventh century. (*b*) What was the great Norman monastery of that time? (*c*) Who were the two great theologians connected with that monastery?

5. (*a*) Who was Magister Sententiarum? (*b*) Why was he so named? (*c*) Describe his chief work.

6. (*a*) Give a brief analysis of the *Summa Theologiæ*. (*b*) Who was its author? (*c*) What was his title?

MILL'S LOGIC.

FRIDAY, APRIL 5TH:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D

1. Explain Mill's doctrine that Names are the Names of things, not of our ideas of things.

2. (*a*) Explain Mill's substitute for the Categories of Aristotle. (*b*) Compare his doctrine of the Categories with Kant's.

3. Give, in substance, Mill's criticism of the doctrines, (*a*) that a Proposition expresses a relation between two ideas, (*b*) that it expresses a relation between the meanings of two names, (*c*) that it refers something to, or excludes something from, a class. (*d*) What is Mill's own doctrine as to the Import of Propositions?

4. (*a*) What is Mill's objection to considering the *Dictum de Omni et Nullo* as the foundation of all reasoning? (*b*) What does he regard as the really fundamental axiom of reasoning?

5. (*a*) Explain Mill's distinction between the First Principles of Geometry that are, and those that are not, hypothetical. (*b*) What view does he take of the latter?

6. Explain the Method of Concomitant Variations, illustrating by an example.

7. (*a*) Show that the methods of simple observation and experiment are inapplicable in certain investigations. (*b*) What method is then to be applied? (*c*) Explain its different stages.

8. (*a*) What is the proper use of scientific Hypotheses? (*b*) Distinguish legitimate and illegitimate Hypotheses, illustrating the latter by an example.

9. (*a*) What sort of uniformities are the properties of kinds? (*b*) Show that their evidence rests on no universal axiom. (*c*) What is the nature of their evidence?

10. (*a*) Give Mill's classification of Fallacies. (*b*) Explain the first class, pointing out their source, and illustrating by an example.

11. Explain the doctrine of Philosophical Necessity, as understood by Mill.

12. (*a*) Discuss the applicability of the Experimental Method to Social Science. (*b*) Explain the Method which Mill considers to be alone applicable.

HISTORY OF MODERN PHILOSOPHY.

TUESDAY, APRIL 9TH:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. (*a*) Name the series of Italian thinkers enumerated by Schwegler as representing the Transition Period between Mediæval and Modern Philosophy. (*b*) Who was the most important of the series? (*c*) What was his general idea of Nature? (*d*) Mention a great German of the same period, and describe the character of his speculations.

2. Sketch the position of Bacon as founder of one of the main tendencies of Modern Philosophy.

3. (*a*) Sketch the negative or polemical aspect of Locke's philosophy. (*b*) Point out a defect attaching to his polemic from a confusion of the question at issue.

4. Trace the logical connection of Empiricism with Radicalism, both in speculation and practice, illustrating by reference to the effects of Empiricism in modern history.

5. Describe the special aspect of Empiricism represented by Helvetius.

6. Explain the theory of Cartesian doubt, in reference to both speculation and practice.

7. (*a*) Notice the points of unreconciled Dualism in the philosophy of Descartes. (*b*) Mention the subsequent attempts at reconciliation in reference to each of these points.

8. Explain the three conceptions on which the system of Spinoza rests.

9. Point out the contrasts, personal and philosophical, between Spinoza and Leibnitz.

10. (*a*) Contrast the character of the German Illumination with that of the French. (*b*) Describe the general style of the works which represent the German Illumination. (*c*) Mention some of their authors.

11. (*a*) Describe the position of Hume in the history of Modern Philosophy. (*b*) Notice the points in his Metaphysics, his Ethics, and his Theology respectively, to which his influence has been mainly due.

12. Give an analysis of Kant's Critique of the Practical Reason.

KANT'S CRITIQUE OF THE PURE REASON.

TUESDAY, APRIL 16TH:—MORNING, 9 TO 12.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Distinguish the terms, A priori, Pure, Transcendental, and Transcendent, as used by Kant.

2. (*a*) Distinguish Analytic and Synthetic Judgments. (*b*) Explain the connection of this distinction with the problem of the Pure Reason.

3. Distinguish (*a*) the Transcendental Æsthetic and the Transcendental Logic, (*b*) the two subdivisions of the latter.

4. State Kant's doctrine of Space and Time, explaining in what sense they are regarded as real, and in what sense as ideal.

5. (*a*) Define Category. (*b*) What is the clue to the discovery of the Categories? (*c*) Following this clue, give a complete table of the Categories.

6. What is meant by the Schematism of the Pure Concepts of the Understanding?

7. Give the Schema of each Category.

8. Name and state the Principles of the Pure Understanding, which correspond to the several Categories.

9. Explain the distinction of Phenomena and Noumena.

10. Distinguish Reason and Understanding.

11. (*a*) What are the Concepts of the Pure Reason named? (*b*) How are they formed?

12. Distinguish the mode of solving the Mathematical Antinomies from that in which the Dynamical Antinomies are solved.

13. Distinguish the different arguments for the existence of the Ideal of the Pure Reason.

14. (*a*) On which of the arguments are the others based? (*b*) Expose its inconclusiveness.

KANT'S THEORY OF ETHICS.

THURSDAY, APRIL 25TH :—AFTERNOON, 2 TO 5.

Examiner,.....J. CLARK MURRAY, LL.D.

1. Distinguish (*a*) Categorical and Hypothetical Imperatives, (*b*) th different kinds of Hypothetical Imperatives.

2. State and explain the Categorical Imperative.

3. (*a*) Explain what is meant by the Autonomy; what, by the Heteronomy of the Will. (*b*) Show that the one is the source of the Supreme Principle, while the other is the source of all spurious Principles of Morality.

4. Classify the spurious Principles of Morality.

5. Explain the source of the Antinomy of the Practical Reason, pointing out the ambiguity in the conception of the Summum Bonum.

6. Explain the error of the Stoics and of the Epicureans respectively, in their definition of the Summum Bonum.

7. (*a*) Explain what is meant by Postulates of the Pure Practical Reason. (*b*) State these Postulates. (*c*) Show that they are required for the solution of the Antinomy of the Practical Reason.

8. Explain the adaptation of man's Cognitive Faculties to his Practical Destination.

FRENCH, GERMAN AND HEBREW.

FRENCH.

FIRST YEAR.

FRIDAY, APRIL 12th :—MORNING, 9 to 12.

Examiner,..... ..... P. J. DAREY, M.A., B.C.L.

1. What is the meaning of *Bourgeois gentilhomme?* What is the principal character in that play? What did Molière wish to turn into ridicule?

2. Translate into English :—

Le Maître à danser.—Pour moi, je vous l'avoue, je me repais un peu de gloire. Les applaudissements me touchent, et je tiens que, dans tous les beaux-arts, c'est un supplice assez fâcheux que de se produire à des sots, que d'essuyer, sur des compositions, la barbarie d'un stupide. Il y a plaisir, ne m'en parlez point, à travailler, pour des personnes qui soient capables de sentir les délicatesses d'un art, qui sachent faire un doux accueil aux beautés d'un ouvrage, et, par de chatouillantes approbations, vous régaler de votre travail. Oui, la récompense la plus agréable qu'on puisse recevoir des choses que l'on fait, c'est de les voir connues, de les voir caressées d'un applaudissement qui vous honore. Il n'y a rien, à mon avis, qui nous paye mieux que cela de toutes nos fatigues, et ce sont des douceurs exquises que des louanges éclairées.—MOLIERE, *Le Bourgeois gentilhomme*, *Ac.* 1, *sc.* 1.

3. Mention five irregular and five regular verbs in the above extract. Prove the irregularity of those you state as irregular.

4. Write the first two sentences of the above extract in the plural, in French

5. Write the participles, and the second person singular and plural of all the simple tenses of *naître*, *tenir* and *vaincre*.

6. Where do you place the adverbs in French? What adverbs do not conform to that general rule? Give four examples.

7. State three relations which the prepositions *à*, *de* and *en* serve to mark. Give example.

8. Where do the English use the indefinite article and the French do not? Give three examples.

9. When do proper names of deities, persons, animals and particular places take the definite article? Give two examples.

10. Give two compound nouns in the singular written with tn mark of the plural. Explain fully the rule to write compound nouns.

11. Write ten nouns which have the two genders in French. Give their meanings in either gender.

12. Translate into French :—

Several Roman eagles were taken by the Germans after the defeat of Varus under the reign of Augustus. The head-dress which that lady wore became her very well. That victory procured him the staff of a marshal of France. To finish their affairs, it would be necessary that they should see each other. Moses conducted the people of Israel. A hundred pounds a year suffice him for his maintenance. Silk-worms are hatched in the beginning of the spring. I shall omit nothing of what depends on me to serve you. He promises enough, but he seldom keeps his word. He feeds himself with vain hopes. Formerly, the education of females was neglected, but now it is very much attended to. Rainbows are formed by the reflection of the rays of the sun in the clouds.

FRENCH.

FRIDAY, APRIL 12TH:—MORNING, 9 TO 12.

Examiners,..... } P. J. DAREY, M.A., B.C.L.
} PROFESSOR M. MILLER.

1. Translate into French :

He was at first inclined to believe, that the man must be pleased with his own condition, whom all approached with reverence, and heard with obedience, and who had the power to extend his edicts to a whole kingdom. "There can be no pleasure," said he, equal to that of feeling at once the joy of thousands all made happy by wise administration. Yet, since, by the law of subordination, this sublime delight can be in one nation but the lot of one, it is surely reasonable to think, that there is some satisfaction more popular and accessible, and that millions can hardly be subjected to the will of a single man, only to fill his particular breast with incommunicable content. "These thoughts were often in his mind, and he found no solution of the question. But as presents and civilities gained him more familiarity, he found that almost every man who stood high in employment hated all the rest, and was hated by them, and that their lives were a continual succession of plots and detection, stratagems and escapes faction and treachery.—JOHNSON'S *Rasselas ch.* 24.

2. Translate into English :

La Grèce en ma faveur est trop inquiétée :
De soins plus importants je l'ai crue agitée,
Seigneur : et, sur le nom de son ambassadeur,
J'avais dans ses projets conçu plus de grandeur.
Qui croirait en effet qu'une telle entreprise
Du fils d'Agamemnon méritât l'entremise ;

Qu'un peuple tout entier, tant de fois triomphant,
N'eût daigné conspirer que la mort d'un enfant?
Mais à qui prétend-on que je le sacrifie?
La Grèce a-t-elle encore quelque droit sur sa vie?
Et, seul de tous les Grecs, ne m'est-il pas permis
D'ordonner d'un captif que le sort m'a soumis?
Oui, Seigneur, lorsque au pied des murs fameux de Troie
Les vainqueurs tout sanglants partagèrent leur proie,
Le sort, dont les arrêts furent alors suivis,
Fit tomber en mes mains Andromaque et son fils.
Hécube près d'Ulysse acheva sa misère;
Cassandre dans Argos a suivi votre père:
Sur eux, sur leurs captifs, ai-je étendu mes droits?
Ai-je enfin disposé du fruit de leurs exploits?
On craint qu'avec Hector Troie un jour ne renaisse:
Son fils peut me ravir le jour que je lui laisse.
Seigneur, tant de prudence entraîne trop de soin:
Je ne sais point prévoir les malheurs de si loin.
Je songe quelle était autrefois cette ville
Si superbe en remparts, en héros si fertile,
Maîtresse de l'Asie; et je regarde enfin
Quel fut le sort de Troie, et quel est son destin:
Je ne vois que des tours que la cendre a couvertes,
Un fleuve teint de sang, des campagnes désertes,
Un enfant dans les fers; et je ne puis songer
Que Troie en cet état aspire à se venger.

RACINE, *Andromaque*, *Act. I, se. II.*

3. Who was Andromache? Who Pyrrhus? Who Orestes? Who Hermione? How were Orestes and Hermione related? Why does Orestes seek death? Explain the words of of Hermione in II, 1. "*Ma famille vengée.*" To what does Pyrrhus allude when he says: "*Ce n'est pas la première injustice dont la Grèce d'Achille a payé le service. Hector en profita.*

4. When does *craindre* require in the subordinate sentence *ne*, when *ne pas*, and when no negative? State the difference between *le fils seul* and *le seul fils*. Substitute the nouns instead of the pronouns in the following passage, Acte I, sc. 2.

Oui, les Grecs sur le fils persécutent le père:
Il a par trop de sang acheté *leur* colère:
Ce n'est que dans le *sien* qu'*elle* peut expirer,
Et jusque dans l'Epire il *les* peut attirer.
Prévenez-*les*.

5. Translate the following idioms: *Je m'en repose sur lui. Il y va de ma gloire. Il se peut. Si je m'en croyais. Que m'importe sa haine. Oubliez à ses pieds jusqu'à votre colère.*

6. Write the Ind. pres. 1st pers. sing., 1st and 3rd plur. and Fut. 1s pers. sing. of *prendre, voir, pouvoir, faire, savoir, venir, vouloir, aller, mourir, vaincre.*

7. What are the beginnings of historiography in the middle ages? Trace its development. Name the principal men that recorded the events of their times. Give the names of their works.

8. Contrast the XVI century with the XVII—in politics, in religion and specially in Literature.

9. Who was the greatest moralist in the XVI century? What is his chief work? How did he write that book? In what class of Philosophers is he placed?

Name two moralists of the XVII century and their works.

10. Who were the four greatest French writers of the XVII century? What works have they written?

THIRD YEAR.

FRENCH.

FRIDAY, APRIL 12TH:—MORNING, 9 TO 12.

Examiner,.....P. J. DAREY, M.A., B.C.L.

1. Translate into English:—

Le Comte.—Sais-tu bien qui je suis?

D. Rodrigue.— Oui; tout autre que moi,
Au seul bruit de ton nom pourrait trembler d'effroi.
Les palmes dont je vois ta tête si couverte
Semblent porter écrit le destin de ma perte.
J'attaque en téméraire un bras toujours vainqueur;
Mais j'aurai trop de force ayant assez de cœur.
A qui venge son père il n'est rien d'impossible.
Ton bras est invaincu, mais non pas invincible.

Le Comte.—Ce grand cœur qui paraît au discours que tu tiens,
Par tes yeux, chaque jour, se découvrait aux miens;
Et, croyant voir en toi l'honneur de la Castille,
Mon âme avec plaisir te destinait ma fille.
Je sais ta passion, et suis ravi de voir
Que tous ses mouvements cèdent à ton devoir;
Qu'ils n'ont point affaibli, cette ardeur magnanime;
Que ta haute vertu répond à mon estime;
Et que voulant pour gendre un cavalier parfait,
Je ne me trompais point au choix que j'avais aif.t

Mais je sens que pour toi ma pitié s'intéresse ;
J'admire ton courage, et je plains ta jeunesse.
Ne cherche point à faire un coup d'essai fatal ;
Dispense ma valeur d'un combat inégal ;
Trop peu d'honneur pour moi suivrait cette victoire,
A vaincre sans péril, on triomphe sans gloire.
On te croirait toujours abattu sans effort ;
Et j'aurais seulement le regret de ta mort.

CORNEILLE, *le Cid, A. II. se. II.*

2. Give a short synopsis of the character of Rodrigue in le *Cid.* Is Chimène's character perfectly natural ? What do you think of the Infante's character ?

3. Mention the two best poets of the eighteenth century, and the three greatest prose writers of that century. What works have they written ?

4. Name the most famous naturalist and the greatest mathematician of the eighteenth century, and their works. What is meant by encyclopedists in the 18th century ? What works did Jean Jacques Rousseau write ?

5. Translate into French :—

On the next day they continued their journey, till the heat compelled them to look round for shelter. At a small distance they saw a thick wood, which they had no sooner entered than they perceived that they were approaching the habitations of men. The shrubs were diligently cut away to open the walks where the shades were darkest ; the boughs of opposite trees were artificially interwoven ; seats of flowery turf were raised in vacant places ; and a rivulet, that wantoned along the side of a winding path, had its banks sometimes opened into small basins, and its stream sometimes obstructed by little mounds of stone, heaped together to increase its murmuring. They passed slowly through the wood, delighted with such unexpected accommodations, and entertained each other with conjecturing what, or who he could be, that, in those rude and unfrequented regions, had leisure and art for such harmless luxury.

JOHNSON, *Rasselas.*

JUNIOR CLASS.

GERMAN.

WEDNESDAY, APRIL 17TH:—AFTERNOON, 2 TO 5.

Examiner,..... C. F. A. MARKGRAF, M.A

1. Translate into English:—

(A)

Muttersprache, Mutterlaut,
Wie so wonnesam, so traut!
Erstes Wort, das mir erschallet,
Süßes, erstes Liebeswort;
Erster Ton, den ich gelallet,
Klingest ewig in mir fort!

. . . . . .

. . . . .

Sprache, schön und wunderbar,
Ach, wie klingest du so klar!
Will noch tiefer mich vertiefen
In den Reichthum, in die Pracht;
Ist mir's doch, als ob mich riefen
Väter aus des Grabes Nacht.

Klinge, klinge fort und fort,
Heldensprache, Liebeswort!
Steig' empor aus tiefen Grüften,
Längst verscholl'nes, altes Lied!
Leb' aufs Neu in heil'gen Schriften,
Daß dir jedes Herz erglüht!

FRAGMENT from „Die Muttersprache," by Schenkendorf.

(B) Schon stehn die beiden Sänger im hohen Säulensaal,
Und auf dem Throne sitzen der König und sein Gemahl;
Der König furchtbar prächtig wie blut'ger Nordlichtschein,
Die Königinn süß und milde, als blickte Vollmond drein.

Da schlug der Greis die Saiten, er schlug sie wundervoll,
Daß reicher, immer reicher der Klang zum Ohre schwoll,
Dann strömte himmlisch helle des Jünglings Stimme vor
Des Alten Sang dazwischen wie dumpfer Geisterchor.

. . . . . .

. . . . .

Die Höflingsſchaar im Kreiſe verlernet jeden Spott,
Des Königs trotz'ge Krieger, ſie beugen ſich vor Gott,
Die Königinn, zerfloſſen in Wehmuth und in Luſt,
Sie wirft den Sängern nieder die Roſe von ihrer Bruſt.

FRAGMENT from „Des Sängers Fluch," by Uhland.

2. Give the Genitive Sing., and the Nominative Plu. of the following nouns, with the meaning of each:—Held, Farbe, Thurm, Meer, Ende, Kunſt, Heide, Pflicht, Land, Ort, Belohnung, Gott, Himmel, Feſt, Ufer, Bach, Freundſchaft, Thor.

3. Decline in the Sing. and Plural:—jener weiſe Fürſt; die ſchöne Sprache; verſchollenes, altes Lied.

4. *a.* Decline the *personal* pronouns. *b.* Decline the *relative* pronouns, and der, die, das, when used instead of them.

5. Conjugate, giving the 3rd. Sing., and the 2nd Plural of all Tenses of the Indicative:—wiederſehen and ſich ſetzen.

6, Write down in full the Present and Imperfect Indicative of:—weggehen, warten, and verlaſſen.

7. Mention *eight* irregular verbs which have the terminations of regular verbs in the Imperfect and Perfect Participle.

8. Parse and convert into Present Infinitives the following forms of verbs:—bat, fährſt, ſchluget, gibt, läuft, zerriſſen, fing, ritt, geholfen ſpricht aus, brachen, fiel.

9. By what prepositions is motion *to* and *from* a place expressed in German? *b.* What prepositions govern *two* cases?

10. Arrange the words in the following sentences according to syntactical rules:—Er nur ankam, um abzureiſen wieder ſogleich.
He only arrived in order to depart again directly.

Ich fragte ihn, weil er hatte geſehen es.
I asked him because he had seen it.

11. Translate into German:—

(The) childhood is the spring and (the) *old* age the winter of (the) life. In our neighbour's house *there* are many rooms. The source of that river is on a high mountain. We are reading the great works of the old Greeks. Lessing lived and died in the last century. I lived since my fifteenth year always in a large town. I will show you something new, if you come with me. I want a quarter *of a* pound *of* coffee, and half a pound *of* white sugar. What o'clock is it? It is a quarter to ten. Our party reached the village only late in the evening. Wicked men often deceive themselves, when they wish to deceive others.

SENIOR CLASS.

GERMAN.

WEDNESDAY, APRIL 17TH:—AFTERNOON, 2 TO 5.

Examiner,.....C. F. A. MARKGRAF, M.A

1. Translate into German:—

No good man abuses the power which he *holds* (has) over his fellow-creatures. He who is not grateful to his benefactors is unworthy of esteem and compassion. Necessity teaches men *many thing* (much); she is the mother of invention. The late elector is said to have been a great prince. The general spoke to the soldiers and exhorted them always to do their duty. I had hastened to bring them this good news, but I found that they knew it already. The Grand duchy of Baden lies in the south of Germany. Frankfort is one of the four free cities. Henry stood at the door when I passed. Returning from our walk we met an old acquaintance. My friend looked at me without recognizing me. On the top of the hill stood a picturesque ruin illumined (beleuchtet) by (von) the last rays (Strahl, m. of the setting sun.

II. Grammar.

1. *a.* From what kinds of words may adjectives be derived? *b.* Explain the meaning of the adjectival affixes bar, ſam, haft, icht, ig iſch, and lich,—adding their English equivalents.

2. What are *factitive* verbs; what do they express, and how are they formed? Give examples.

3. Mention some verbs which require a preposition in one form, and merely the Accusative in another.

4. Illustrate in the following sentences the various ways of expressing the Imperative in German:—Go on reading! Stay here! Hold fast! Do not go away! Open! Be silent!

5. Specify the cases, where the Perfect and Pluperfect of the Indicative are used in German.

6. Es erbarmt mich ſeiner. Du hätteſt ſchreiben müſſen. Euch wurde befohlen. Was iſt zu thun? Er wird jetzt wohl zurückgekehrt ſein. Hältſt du dein Verſprechen, ſo werde ich das meinige halten. Wir blieben ſitzen. Sie kamen geritten.—

Translate the above sentences and explain briefly their peculiar construction.

III. Translate from Schiller's „Maria Stuart:"—
Act. I. Scene VII., pp. 27–28.

IV. Literature.

1. Give an outline of the life of *Schiller*. Enumerate his principal dramas. Give an account of the plot of "*Maria Stuart*," and delineate the leading personages of this tragedy.—What can you say as to the general character of *Schiller's* poetry? Name some of his most prominent poems. Give also the titles of some works which established his celebrity as a historian and philosopher.

2. Give some account, with dates, of *Koerner*, *Rückert* and Count *Auersperg*. Point out the peculiar character of their respective writings.

3. Mention the species of poetry cultivated by the "*Suabian School*," and name the leading writers belonging to the same.

JUNIOR CLASS.

HEBREW.

FRIDAY, APRIL 12TH:—AFTERNOON 2 TO 5.

Examiner, ...REV. A. DE SOLA, LL.D.

1. Give the rules for the formation of the construct cases of masculine nouns, founded on the use of mutable and immutable vowels.

2. Describe *Segholates*, and show how the variously pointed paradigms may be included in one general description of this class of nouns.

3. Conjugate the verb למד, *Kal* form, Indic. pret. participles act. and pass.

4. Add the pronominal suffixes sing. and pl. to the noun בית in the singular.

5. Translate literally, Exodus, ch. i, first twelve verses.

6. Describe ו conversive and consecutive; give its proper punctuation, and show how it affects the syllabication of the verb to which it is attached.

7. Conjugate the verb שמר *Kal* form, Future tense and Imperative mood.

8. Give some examples illustrating the rules affecting adjectives and nouns when in connection with each other; show how the former are used as predicates when the copula is omitted.

9. Give examples to show how essential changes of the vowels and of *Sheva* are effected by the pause-accent, and how the latter shifts its place on account of changes in the word.

10. Write out the noun קול joined to the definite article, and the prepositions בכלם in their contracted forms.

11. Translate into Hebrew:—Come let us deal wisely with these men, or it may come to pass that when there is war in the land, they may join our

enemies and fight against us. So they set over them task-masters to afflict them with their burdens. They made their lives bitter with hard bondage and in all manner of service in the field; still they increased abundantly and waxed exceedingly mighty, and the land was filled with them.

12. Translate into English:—

ויקם מלך חדש על הארץ הזאת· הנה העם הזה רב ועצום ממנו· ויבנו ערים נדלת
ואת בלעם בן בעור הרגו בחרב· למדנו לשון הקדש· האנשים האלה טובים הם·
הבתים ההם נדלים· עם גדול ורב בני ענקים אשר אתה ידעת ואתה שמעת:

SENIOR CLASS.

HEBREW.

FRIDAY, APRIL 12TH:—AFTERNOON 2 TO 5.

Examiner,.....REV. A. DE SOLA, LL.D.

1. Conjugate the irregular verb שלח in *Piel* form.

2. Show what changes take place in the *Hithpael* form, when the first letter of the root is ש or צ; e.g., in the verb צרק.

3. Translate literally, Genesis, ch. II, verses 1 to 8.

4. Analyze in v. 1, ויכלו; in v. 2, מלאכתו; in v. 3, ויברך and לעשות in v. 4, בהבראם and עשות; in v. 5, טרם יהיה and המטיר; in v. 6, והשקה and יעלה.

5. Give the future tenses of למד in *Kal*, *Niphal* and *Piel* forms.

6. Write with pronominal suffixes, in both numbers, the feminine noun תורה.

7. Translate literally, Genesis, ch. I, verses 20 to 31, and analyze verses 25, 26 and 27.

8. Conjugate the preterite tenses of the verb פקד in the *Hiphil*, *Hophal* and *Hithpael* forms.

9. Show how the various forms of masculine nouns may be included in two great classes; how the construct cases of these nouns are affected by the use of mutable vowels in the nominative; the changes consequent thereon; and how the *Segholates* may be included under one general description.

10. Translate into Hebrew:—

The husbandman sows seed in the ground and it springs forth food for man and beast. That great luminary, the sun, gives life to every herb producing seed after its kind, and to every tree producing fruit after its kind. The moon is smaller than the sun; but it rules the night and gives light upon the earth. When there has been no rain, a mist will arise from the earth and water all the face of the ground.

11. Translate into English.

ביום השני עשה את הרקיע· ביום השלישי נקוו המים אל מקום אחד ונראתה היבשה
וארץ הוציאה דשא עשב מזריע זרע למינהן ועץ עשה פרי אשר זרעו בו למינהו··
היום הרביעי עשה אלהים את שני המארת הנדלים:

THE NEIL STEWART PRIZE IN HEBREW.

GRAMMAR.

TUESDAY, APRIL 16TH:—MORNING, 9 TO 12.

Examiner,.....REV. A. DE SOLA, LL.D.

1. Conjugate the irregular verb ישב in the *Kal*, *Hiphil* and *Hophal* forms.

2. Give an exposition of the Hebrew accents; explain their uses as signs of the tone, and as signs of interpunction. Give a list of the chief disjunctives. Explain מלעיל and מלרע.

3. Add the pronominal fragments, both singular and plural, to the noun בית, in sing. and pl. numbers.

4. Conjugate a verb ע doubled (e. g. סבב) in the *Niphal* and *Hophal* forms, future tenses.

5. Give the rules for *Sheva*, *Dagesh*, *Metheg*, *Makkaph*, *Raphé* and *Mappik*, with examples.

6. Conjugate the irregular verb לקח in the future *Kal*, נגש in the pret *Niphal*, and נגע in the future *Hiphil*.

7. Give the rules for the Definite Article, with the various changes necessitated by the gutturals, and for the formation of the plural, masculine and femine, of nouns; the construct cases plural in both genders, and the absolute and construct forms of the dual.

8. Reduce into two great classes the various paradigms of masculine nouns as given by the old Hebrew grammarians and Gesenius; show the influence of mutable and immutable vowels in forming the construct cases of the first class, and give one general description that shall include all *Segholates*

9. Conjugate a verb פ"ע *e. g.* עמד in the *Niphal* pret. and *Hiphil* future.

10. Shew the relation of the substantive to the adjective, and how the degrees of comparison of the latter are indicated.

11. Give the rules for ו conversive and ו conjunctive; show the changes in their punctuation, especially when the former precedes a guttural.

12. Write the pronouns (*a*) in their absolute forms, (*b*) in their fragmentary forms, when added objectively to a verb, and (*c*) with the prepositions מן, את, and אל.

THE NEIL STEWART PRIZE IN HEBREW.

TRANSLATION.

WEDNESDAY, APRIL 17TH :—MORNING, 9 TO 12.

Examiner,.....REV. A. DE SOLA, LL..D

1. Translate literally Habakkuk, Ch. I., first ten verses ; Ch. II., v. 17 to 20 ; and Ch. III., v. 1 to 7, and v. 15 to end of the book.

2. Analyze in I., 1, משא what difference between it and נבואה ; חזה difference between תוזהי and נביא ; v. 3 חביט, שא ; v. 4 תפוג, מעקל ; v. 5 והתמהו, Analyze fully verses 13, 14 ; in Ch. II., verses 4 and 5; in Ch. III, verses 9 10, 11.

3. T anslate Genesis, Ch. I., v. 29 to end; Ch. II., first six verss ; Ch.. III., v. 17 to end ; Ch. VI., v. 1 to 7 ; Ch. VIII., v. 15 to end ; Ch. IX, v. 9 to 15.

4. AnalyzeII., 1 ; III., 5, 6 ; VI., 10, 11 ; VII., 3, 4, 5.

5. Translate literally the first five Psalms.

6. Analyze Ps. II., v. 2, 3, 4, 5, point out uses of paragoge ; III., 8, 9 ; V., 7, 8, 9, 10.

7. Translate into English :

א רילוז הורפערהה חו הוא במלכים יתקלס ורזנים משחק ו הוא לכל מבצרי שחלק ויצבר ויעבר ואשם זו כחו לאלהו הלוא אתה מקדם ה׳ אלהי קדשי לא נמות ה׳ למשפט שמתו וצור להוכיח יסרתו טהור עינים מראות רע והביט אל עמל לא תוכל למה תביט בונדים תחריש בבלע רשע צדיק ממנו :

8. Translate into Hebrew :

Was the Lord wroth against the rivers? yea, was thy anger against the rivers? was thy wrath against the sea, that thou rodest upon thine horses, thy chariots of victory. Thy bow is quite laid bare, like rods of punishment (goeth forth) thy word, Selah, into rivers thou splittest the earth. The mountains saw thee, they trembled ; the flowing waters passed along ; the deep issued forth its voice, the height lifted up its hands.

CHEMISTRY AND NATURAL SCIENCES.

FIRST YEAR ARTS AND DEPARTMENT OF SCIENCE.

ELEMENTARY CHEMISTRY.

TUESDAY, APRIL 16TH :—AFTERNOON, 2 TO 5.

Examiner,.....B. J. HARRINGTON, B.A., Ph.D.

1. By what tests may Iodides be detected when in solution?
2. Describe the manufacture of Phosphorus from bones, and point out the differences between ordinary and red or amorphous Phosphorus.
3. What are the principal compounds of Boron, and what their sources?
4. Describe the manufacture of Sulphuric Acid, and state what quantity of Acid could be obtained from a ton of Iron Pyrites.
5. In what ways may salts of the metals be obtained? Give examples of Acid, Normal and Double Salts.
6. How may Baric Nitrate be obtained from the Sulphate?
7. How is Metallic Lead obtained from the native Sulphide?
8. Give the ordinary names of the substances represented by the following formulæ :—

$Pb C O_3$, $Zn O$, $Cd S$, $Ag N O_3$, $Hg Cl_2$ and $Hg Cl$.

9. What are the best tests for the detection of Arsenic?
10. Explain the following equations :

$$3 K H O + 3 H_2O + P_4 = 3 K P H_2 O_2 + H_3P$$
$$Sb_2 S_3 + 6 HCl = 2 Sb Cl_3 + 3 H_2 S.$$

INTERMEDIATE AND SESSIONAL EXAMINATIONS.

BOTANY.

TUESDAY, APRIL 16TH :—MORNING, 9 TO 12.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. What ingredients are specially needed in fertile soils, and what are the general relations of plants to soils?
2. Explain the relations of Carbonic Acid and Ammonia to the nutrition of the plant.
3. Name the circles of organs in a perfect flower, and describe fully the structures of the Anther and Pollen.
4. In what natural families of plants do we find Samaras, Tetradynamous Stamens, and Ray and Disk Florets.

5. State the place in the natural system of any genera containing Canadian edible fruits and timber trees, and enumerate the principal species.

6. Explain briefly what arrangements are implied by the terms Extrorse, Dehiscent, Epigynous, Monadelphous, Syngenesious, as applied to parts of the flower.

7. Explain the nature and functions of the Foramen, Placenta, Suspensor, Cotyledons, in connection with the ovule and seed.

8. What is a Sporangium? Describe some of the kinds, mentioning the plants in which they occur.

9. How is fertilization effected in Mosses, Ferns and Fungi.

10. Explain the gradation of higher and lower groups in the natural system, with an example.

11. State the characters of Endogens, Gymnosperms, Acrogens and Anophytes, with examples.

12. Refer the specimens exhibited to their series and class, and describe the forms of their leaves and the character of their inflorescence.

B.A. AND Ba. App. Sc. ORDINARY EXAMINATIONS.

GEOLOGY.

Tuesday, April 16th:—Morning, 9 to 12.

Examiner,..... ....J. W. Dawson, LL.D., F.R.S.

1. Explain the nature and origin of slaty structure, of volcanic dykes and of glacial striation.

2. Explain denudation, and some of the results which it produces in horizontal and inclined strata.

3. Illustrate by diagrams the terms dip, strike, anticlinal and synclinal arrangements, unconformability, faults.

4. State the nature of the evidence on which the chronology of stratified rocks is based.

5. Mention the principal rocks, and describe the geographical distribution of the Lower Laurentian.

6. State in order the Upper Silurian Formations represented in Ontario, with their general geographical distribution.

7. State the subdivisions of the Carboniferous in Nova Scotia, and their equivalents in Europe.

8. Describe the Keuper, Lias and Wealden of Europe, and state their geological relations.

9. What are the subdivisions of the Eocene in France and of the Post-pliocene in Canada.

10. State in a tabular form in what formations the following fossils occur: *Orthis, Eozoon, Paradoxides, Productus, Zaphrentis, Trigonia, Belemnites, Palæotherium?*

11. What are the leading genera of Carboniferous Plants? Describe one of them.

12. Name characteristic Corals and Crustaceans of the Lower Silurian and Cambrian, Fishes of the Devonian, Reptiles of the Triassic.

13. What do you know of the specimens exhibited, as to their names and geological ages?

THIRD YEAR AND MIDDLE YEAR APPLIED SCIENCE.

ZOOLOGY.

TUESDAY, APRIL 16TH:—AFTERNOON, 2 TO 5.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. Name the classes of the *Radiata*, and characterize two of them, with examples.

2. Describe the highest class of the *Mollusca*, and give an example of each of its orders, with a statement of the points in which these differ.

3. State the characters of the *Brachiopoda*, with examples of the principal Families.

4. State the distinctions between *Insecta, Arachnida, Crustacea.*

5. Refer to their places in the classification the following animals: Tape-worm, Ship-worm, Limpet, Cray-fish, Star-fish.

6. State the distinctive characters of the class *Reptilia*, and its division into orders, with the distinction between the Batrachians and Reptiles proper.

7. Characterize the *Rodentia, Ungulata* and *Carnivora*, with examples.

8. Describe the corallum of *Astræa* and the tentacles of *Actinia.*

9. What are the distinctive characters of Protozoa, and what views may be taken as to their place in the Zoological System?

10. Tabulate, with reference to their places in the system, the following groups:—*Rugosa, Tubicola, Ganoidea, Belemnitidae, Trilobita, Dinosauria.*

11. Characterize the orders of *Echinodermata*, and describe the shell and its appendages in *Echinus.*

12. State the distinctions between *Gastroopoda, Lamellibranchiata*, and *Tunicata.*

13. Describe the specimens exhibited, referring them to their places in the system.

EXAMINATION FOR HONOURS.

THIRD YEAR.

MINERALOGY AND LITHOLOGY.

THURSDAY, APRIL 25TH:—MORNING, 9 TO 12; AND AFTERNOON, 2 TO 5.

1. Explain the relations and differences between the cube, the square prism, the right rectangular prism, and the right rhombic prism.

2. Define the law of hemihedrism, and the relation between the hexagonal prism and the rhombohedron, with examples of Minerals presenting these forms.

3. Give examples of Minerals which can be distinguished by specific gravity, or hardness and lustre.

4. State the chemical and crystallographic differences of the Feldspars, and their geological relations.

5. Describe chemically the more important Ores of Iron, and explain their geological distribution.

6. Mention the more important Minerals containing Fluorine, Chromium, and Boracic Acid, and describe fully one of them.

7. Name and describe the Sulphides of Lead, Iron and Copper.

8. What are the more important chemical and geological relations of Pyroxene and Horublende, and their principal varieties.

9. Describe some of the principal Hydrous Silicates of Magnesia and Alumina.

10. Describe chemically the more important Minerals of Barium and Strontium.

11. To what Mineral species do Agate, Marble, Pumice, Marl, and Emery belong. Describe two of these species with their varieties.

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12. Explain the most natural and useful Classification of Rocks.

13. Describe Syenite, Gneiss, Argillite, Agglomerate, Shale, stating their constituent minerals.

14. Explain Basaltic, Oolitic, and Slaty structures.

15. Name and describe the Rocks and Minerals exhibited, stating, in the case of the Rocks, the Minerals of which they are composed.

GEOLOGY AND PALÆONTOLOGY.

WEDNESDAY, APRIL 17TH:—9 A. M. to 12; and 2 to 5. P.M.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. State the manner in which the Laurentian rocks of Canada may be best divided into groups—the Horizons of Eozoon, Graphite and Apatite, and the probable relations of the Hastings group.

2. Sketch the geographical distribution of the Huronian in North America, and mention its useful minerals.

3. How is the Cambrian system represented in Canada as compared with its development in England and Wales.

4. Describe the Palæozoic formations represented in the vicinity of Montreal.

5. State and characterize the sub-divisions of the Carboniferous in Nova Scotia and Western America, and compare them.

6. Explain the mode of occurrence and geological ages of Petroleum Rock Salt, and the principal ores of Iron, as occurring in Canada.

7. Enumerate the characteristic fossils of the Black River and Corniferous Limestones.

8. State the geological position and probable American equivalents of the Ludlow, Bala, Wenlock and Skiddaw formations.

9. In what formations in Canada do the following genera occur, and what is their precise range in geological time: (*a*) *Receptaculites*, (*b*) *Leptæna*, (*c*) *Sigillaria*, (*d*) *Favosites*, (*e*) *Calymene*, (*f*) *Lepidodendron*, (*g*) *Stromatopora*, (*h*) *Psilophyton*, (*i*) *Orthoceras*, (*k*) *Lingula*.

10. Tabulate the sub-divisions of the Silurian in Europe, and of the Devonian in America.

EXAMINATION IN SPECIMENS.

Refer the specimens exhibited to their geological formations, and to their places in the Zoological and Botanical classifications.

B. A. EXAMINATION FOR HONOURS.

MINERALOGY.

FRIDAY, MARCH 29TH:—9 MORNING, 9 TO 12.

Examiner,.....J. W. DAWSON, LL.D., F.R.S.

1. Describe chemically the more important Minerals of Arsenic, Mercury and Copper.
2. State the chemical and crystallographic differences of Hornblende and Pyroxene, and their geological relations.
3. Name and describe the Oxides of Tin, Zinc and Manganese.
4. State any cases in which optical characters may be usefully employed in determining Minerals. Give examples.
5. State the composition of Staurolite, Epidote and Tourmaline, and explain their occurrence in Metamorphic and Igneous rocks.
6. Describe fully the mode of occurrence and geological relations of Glauconite and the Chlorites.
7. Describe some of the principal minerals containing Fluorine and Phosphoric Acid.
8. What are the distinctive characters of Pyrite and Chalcopyrite; Barite and Celestite; Dolomite, Ankerite and Calcite?
9. Describe fully Graphite, with its modes of occurrence in Canada.
10. What are the chemical relations of Hematite, Magnetite and Franklinite?
11. Classify the Felspars on Crystallographic grounds.

Examination in Specimens, 2 to 5.

GEOLOGY AND PALÆONTOLOGY.

THURSDAY APRIL 25TH:—MORNING, 9 TO 12, AND AFTERNOON, 2 TO 5.

Examiner,.....J. W. DAWSON, LL.D, F.R.S.

1. What Fossil remains characterize the Trias in New England, and Virginia, and Prince Edward Island.
2. State the distribution of the Cretaceous in North America, and its lithological characters in any of the districts in which it occurs.
3. Explain the distinctive characters of the Floras of the Triassic and Cretaceous.
4. What is the geological range of the genera *Ammonites*, *Inoceramus*, *Baculites*, *Mosasaurus*, *Trigonia*, *Gryphœa*, *Iguanodon*, and of what formations are they most characteristic.

5. Describe the principal deposits of Coal and Lignite in the Mesozoic and Cenozoic formations of Canada.

6. State the subdivisions of the Tertiary, as represented on the East Coast of North America, and in the Western provinces and territories of Canada.

7. Describe the subdivisions of the Post-pliocene in Canada, and state the various theories as to the causes and phenomena of the Glacial Period, with their grounds.

8. Enumerate the characteristic species of Mollusks in the Leda Clay Saxicava Sand, and state their present distribution.

9. What is the mode of occurrence of *Mastodon* and *Elephas* in Canada, and what species are known?

10. Describe the phenomena of Raised Beaches and Terraces as seen in the St. Lawrence Valley.

Examination in Specimens.

11. Catalogue the Fossils contained in the specimens exhibited (Nos. 1 to 10), and refer them to their respective Geological Formations.

LITHOLOGY AND PRACTICAL GEOLOGY.

TUESDAY, APRIL 9TH:—MORNING, 9 to 12.

Examiners,..... { J. W. DAWSON, LL.D., F.R.S.
B. J. HARRINGTON, B.A., Ph.D.

1. What are the principal points to be noted in the study of rocks (1) in the field and (2) in the laboratory?

2. Distinguish between the terms foliated, laminated and slaty, and describe the textures known as scoriaceous, amygdaloidal, and porphyritic.

3. State the different grounds on which a classification of rocks may be based, and point out the principal difficulties which exist in all attempts at a natural classification.

4. What are the mineral constituents of Gabbro, Norite, Dolerite and Diabase?

5. What are the principal members of the acidic group of volcanic rocks? Describe them briefly.

6. Name the principal accessory minerals occurring in Crystalline Limestone, and state how Limestone and Dolomite may be most readily distinguished.

7. Give your views with regard to the origin of Serpentine, and point out the principal differences between Laurentian Serpentines and those of more recent age, as observed in Canada.

8. Define the terms Microlite, Trichite, Viridite and Plagioclase, and describe the appearances ordinarily presented by the following minerals

when their sections are examined microscopically:—Olivine, Quartz, Augite, Hornblende, Nepheline and Magnetite.

9. Explain the modes of occurrence of Mineral Veins, and classify them in accordance therewith.

10. State some of the difficulties attending the study of contorted and faulted rocks, and the methods of dealing with them.

11. Explain the manner of indicating Geological observations in general maps and sections.

12. Given an exposure showing the outcrop of a vein or bed at one point, how may its extent and direction be ascertained?

Examination in specimens 2 to 5 p. m.

DEPARTMENT OF APPLIED SCIENCE.

SENIOR YEAR.

SPHERICAL TRIGONOMETRY AND ASTRONOMY.

FRIDAY, MARCH 8, 1878:—MORNING, 9 TO 12.

Examiner.....ALEXANDER JOHNSON, LL.D.

1. Define a spherical triangle, and prove that any two sides are greater than the third.

2. Prove that in any spherical triangle

$$\cos \tfrac{1}{2} A = \sqrt{\frac{\sin s \sin (s-a)}{\sin b \sin c}}$$

3. From the formulæ for oblique-angled triangles deduce that in a right-angled triangle ($C = 90°$)

$$\cos c = \cos a \cos b$$

4. Prove that the sines of the sides are proportional to the sines of the opposite angles.

5. Describe the method of finding the direction of the meridian by the two greatest elongations of a circumpolar star.

6 Given that the observed altitude of the sun's upper limb = 28° 21′ 24″ semi-diameter = 16′ 11″, height of the eye =
tude of his centre (introducing the corrections for refraction and parallax)

7. At a place in lat. 25° 40′ N., the sun's correct central altitude was found to be 10° 6′ 27″, when his declination was 8° 5′ 56″ S.; find the apparent time.

8. The *observed* Zenith distance of a star which was south of the Zenith was 23° 5′ 24″, its declination being 28° 22′ 48″ N.: calculate the latitude of the place.

9. If the sun pass the meridian at 11 h. 59 m. 19s. by the chronometer, the equation of time being + 13 m. 22 s.; find the error of the chronometer or mean time.

SENIOR AND MIDDLE YEARS.

ELEMENTS OF DIFFERENTIAL AND INTEGRAL CALCULUS AND OF ANALYTIC GEOMETRY,

FRIDAY, MARCH 29TH:—MORNING, 9 TO 12.

Examine,..... ALEXANDER JOHNSON, LL. D.

1. State the method of finding the differential coefficient in the case of any of the fundamental formulæ, and apply it to find $\frac{dy}{dx}$ when $y = \cos x$

a. Find $\frac{d^2y}{dx^2}$ and $\frac{d^3y}{dx^3}$ in this case.

2. Integrate $\int_x (3x^2 + 5x^6 - 4 \sin x)$

3. Prove that $\frac{d}{dx}\left(\frac{u}{v}\right) = \frac{v\frac{du}{dx} - u\frac{dv}{dx}}{v^2}$

a. Find the differential co-efficient of $\tan x$, assuming those of $\sin x$ and $\cos x$.

4. If $y = (x^2 + 3x + a)\cos x$; find $\frac{dy}{dx}$

3. State the meaning of and prove the formula from which is found the volume of a surface of revolution, viz.:

$$\frac{dV}{dx} = \pi y^2$$

a. Apply it when the surface is obtained from the ellipse

$$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1.$$

as to get formulæ for the volumes of prolate and oblate spheroids.

6. Prove that in mechanics

$$v = \frac{ds}{dt}, \quad f = \frac{dv}{dt}$$

defining f accurately.

a. A stone is projected vertically downward ,from a point which is 50 fee below the summit of a precipice with a velocity of 70 feet per second, apply the above formulæ to calculate its distance from the summit at the end of 3 seconds.

7. Trace the curve $y = x^2$.

a. Find the equation of the tangent to it at the point for which $x = 4$ and alculate the angle which this makes with the axis of x.

8. Find the equation of a line through the point 3, 4, parallel to

$$5x + 6y + 7 = 0.$$

9. Show that the equation of a circle (radius =) with the centre at

$$x^2 + y^2 = r^2.$$

a. Using the same axes of co-ordinates for both curves trace

$$x^2 + y^2 = 16 \text{ and } \frac{x^2}{16} + \frac{y^2}{4} = 1.$$

10. Write down the different forms of the equation of the straight line, and state the geometrical meaning of the co-efficients.

SPECIAL EXAMINATION IN MATHEMATICS AND NATURAL PHILOSOPHY.

FRIDAY, APRIL 5TH:—MORNING, 9 TO 12.

Examiner, ...ALEXANDER JOHNSON, LL.D.

1. A coal pit 1,200 feet deep is flooded by a feeder, discharging 900 gallons per minute at the bottom; if the united pumping engines of the pit be 400 H.P., and are in such condition that they only utilize 60 per cent. of their nominal horse-power; show that the water will rise in the pit, and find to what level it can be kept down.

2. A handle with an arm two feet long, turns an endless screw, which works a wheel with 60 teeth; and a chain, supporting a weight of 5 tons is coiled up on the shaft of this wheel, the shaft being 6 inches in diameter What force must be applied to the handle to balance this weight?

3. Describe the arrangement of the wheel and axle when the axle is composed of two parts having different radii, and apply the principle of "constancy of work done" to find the ratio of the Power to the Resistance.

4. A body weighing 10 lbs., moving at the rate of 5 miles per hour, overtakes a body of 5 lbs., moving in the same line at the rate of 3 miles per hour; their relative co-efficient of elasticity is $\frac{1}{2}$; find their velocities after impact.

5. A hollow cylinder floats with its length horizontal; it has $\frac{3}{4}$ths of its diameter out of water, but sinks to the water level when loaded with a weight of 32 cwt.; supposing the diameter of its external surface to be 3 feet, find the length of the cylinder.

6. A spherical balloon of 10 meters diameter is filled with gas whose sp. gr. is 0·500 and pressure 726 mm; find the weight of the gas if its temperature is 10° C.

7. The apparent weight of a specific gravity bottle when filled with water at 60° is 752·32 grains; when filled with air it is 252·21; when filled with a specimen of acetic acid it is balanced by a counterpoise of 532·41 grains; find the specific gravity of the acid.

8. If the height of the Peak of Teneriffe be 12,350 feet, and the depression of the horizon from its summit be 1° 58′ 10″; find the diameter of the earth.

9. The distance between two marks (A and B) on the banks of a river is 1410·4 yards; find the distance between two rocks (C and D) in the river from the following angular measurements made at each of them:—

Angle $ACB = 36° 15′ 5″$; Angle $ADB = 45° 1′ 3″$

" $BCD = 33° 7′ 40″$ " $ADC = 30° 2′ 0″$.

THIRD YEAR.

GENERAL PAPER.

APRIL 9TH:—(*Time*, 3 *hours*).

Examiner,.....HENRY T. BOVEY, M.A, C.E.

1. State approximately the ratio which the strength of cast-iron to resist crushing bears to its strength to resist tearing, and shew in what way this ratio is connected with the best ratio for the sectional areas of the top and bottom flanges of a cast-iron girder.

2. What are the principal properties of steel?

3. How are structures affected by the climate and by shocks?

4. Describe Mr. Bethell's process of "creosoting" timber.

5. A rectangular balk of timber 14 inches deep, and 12 inches broad, rests on two supports 25 feet apart; the weight of the timber per cubic foot is 45 lbs., and the co-efficient of elasticity is 1,000,000. Find how much the beam will deflect.

6. Examine the form assumed by a double-flanged girder, under a load uniformly distributed:—

1. When the thickness of the flanges varies.
2. When the depth of the girder varies.

7. Railway bridges have in general two tracks:—

1. Both on the same platform.
2. Each on an independent platform.

State the advantages or disadvantages attached to each of these dispositions.

Is any advantage to be derived by the employment of a mixed disposition of 3 girders?

8. Describe the process of "laying-out" bridge-work.

9. A Warren girder, 100 feet long, supports on the under chord a permanent load of 3600 lbs. per foot run. The girder consists of 8 bays, and is 10 feet in depth. Find the stresses in the members of the girder which would be cut by a vertical section 15 feet from the middle of the girder.

10. Two plates are rivetted together with (n) rows of rivets, (t) is the thickness of the plate, and d is the diameter of the rivets; show that, if the shearing unit strain of the rivet iron be equal to the tensile unit strain of the plates, the pitch of the rivets, in order that the strength may be a maximum, is given by,

$$c = d + \frac{\pi}{4} \frac{d^2 n}{t}$$

11. Explain the diagram of a steam engine, and the instruments by which it is obtained practically.

12. The combined area of the diagrams from both sides of the piston of a steam engine is (A) square inches; (p) is the scale of pounds on the square inch to an inch; (f) that of feet to an inch; (T) is the mean turning effort exerted by the crank shaft; find the efficiency of the engine.

SECOND AND THIRD YEARS.

RAILWAY WORK.

APRIL 10TH:—(*Time*, 3½ *hours*).

Examiner,.....HENRY T. BOVEY, M.A., C.E.

1. What is the object of the "Reconnaissance" in the district in which it is proposed to lay down a line of railway?

2. Describe the method of setting out curves by offsets. Why is this method very useful in the case of curves with very long radii?

3. A B, C D are two straights of a railway, which being produced meet at a point E, the angle AEC being 90°. It is required to connect the two straights by a curve of 20 chains radius. Show how to find the points from which the curve springs, and how to set out the curve without a theodolite or transit.

4. State what you know about the "shrinkage" of earthwork, and explain how allowance is to be made for the "subsidence" of earthwork.

5. An embankment of 200,000 cube yards is to be formed. The regular cuttings will furnish only 120,000 cube yards of loam, which is found to shrink 12 per cent. when embodied in an embankment. It is therefore necessary to "borrow" gravel, which shrinks 8 per cent., in order to make up the deficit. The gravel is furnished at 35 cents per cube yard, and the loam at 30 cents per cube yard.

Contrast the estimated cost of the embankment when shrinkage is taken into account, and when not.

6. State the items which go to make up the total cost in executing earthwork.

How does the length of haul affect the cost?

7. What are the principal requirements of the permanent way of a railroad?

8. Give a complete pen and ink sketch of tranverse section of a railway cutting with a double track, inserting all necessary dimensions.

9. The top of a railway cutting is level across, the slopes are 3 to 1, the breadth of the bottom is 25 feet, and the depth of the cutting at the several sections, 100 feet apart, is 12, 14, 16, 18, 22 feet, find the number of cube yards of earth to be removed.

10. Describe, with a sketch, any kind of rail joint with which you are acquainted, stating any advantages or disadvantages which it may possess.

11. A train has to run round a curve of 10 chains radius, with a speed of 20 miles an hour. What should be the elevation of the outer rail? (Gauge, 4′ 8½″.)

12. Describe and sketch the arrangement employed for:—

1. A single crossing.
2. A double crossing.
3. Connecting the main track with two side tracks.

What is the use of a "switch?"

SECOND AND THIRD YEARS.

APPLIED MECHANICS.

APRIL 20TH:—(*Time*, 4 *hours*).

Examiner.....HENRY T. BOVEY, M.A., C.E.

1. Explain *fully* the meaning of the following terms:—

"Factor of safety," "Proof Strain," "Set," Elasticity," Resilience," "Dead Load," "Live Load."

2. Describe the character of the strains to which a bar of any material may be subjected by the action of external forces. What is the nature of the information furnished by the phenomenon of rupture?

3. A square wrought iron bar having a side of 2 inches, and being 10 feet in length, is subjected to a tensile strain of 10 tons. If the co-efficient of elasticity of wrought iron be 10,000 tons, find the elongation produced in the bar; and also find, in foot lbs., the work required to produce the elongation.

4. A beam A B rests on two supports at A and B, and is divided into two segments A P, B P by a point P. On the segment A P the beam has

to support a uniformly distributed load of (m) lbs. per unit of length, and on the segment B P uniformly distributed load of (n) lbs. per unit of length.

Find the bending moment and shearing force at any section between A and P, and also at any section between B and P.

Draw the curves of moments and shearing forces.

5. A beam 16 feet long and 6 inches square can just support a weight of 2160 lbs. at the centre. What weight will a beam of the same material, 20 feet long, 10 inches deep, and 5 inches wide, bear at the same point?

6. A railway girder is subjected to a uniformly distributed rolling load, show how to find the maximum shearing strain and bending moment at any point of the girder.

A railway girder is 450 feet from centre to centre of bearings, and 25 feet from centre to centre of flanges, and its weight is 1200 tons. The heaviest train which crosses it weighs (1) ton per foot run.

Find the maximum bending moment and shearing strain, due to the train, at a point 50 feet distant from one end. Also find the total bending moment and shearing strain at the same point, due to the train and weight of the girder combined and also the flange strains.

7. A thin hollow cylinder, whose internal radius is R, and whose thickness is T, is subjected to an internal fluid pressure whose intensity is P.

Show that the hoop stress Q is given by $Q = \frac{P R}{T}$

What should be the thickness of the plates of a cylindrical boiler 5 feet in diameter, and worked to a pressure of 60 lbs. steam per square inch, in order that the working tensile strain may not exceed 1·7 tons per square inch of gross section?

8. Explain *fully* what is meant by the neutral surface and the neutral axis of a bent beam, and show how to find the position of the neutral axis when the intensities of the stresses at the top and bottom of the beam are known.

A girder has a top flange 4 inches wide, a bottom flange 5 inches wide, and a web 8 inches deep, the thickness of all being the same, namely, 1 nch. Find the position of the neutral axis, the intensity of the stress due to compression being 4 tons and that due to tension 5 tons.

9. Show that when a definite load is suddenly applied to a structure it will produce a greater deflection than when gradually applied; and in the case of a beam, in which the elastic limit is not exceeded, the deflection from the suddenly applied load will be double that from the same load applied gradually.

10. Prove that the bending moment at any section of a girder is given by $M = \frac{f}{c} I$.

A solid circular wrought-iron crane post is 11 feet high. The load on the crane produces a bending stress equivalent to 21 tons acting at right angles to the top of the post. Find the diameter of the crane post at the bottom so that the inch strain may not exceed 4 tons.

11. How may the stiffness of a beam be measured?

A rectangular beam rests on two supports, and carries a weight of W lbs. uniformly distributed. If the breadth of the beam remain constant, show that its stiffness is proportional to $\left(\frac{d}{e}\right)^3$, where (d) is the depth, and (l) the length of the beam.

12. (θ) is the torsion per unit of length of a circular shaft whose radius is (R). Assuming that the resistance to torsion of an element at a distance (r) from the axis, is m. θ. r, where (m) is a constant; show that the twisting couple on the shaft is given by

$$P.\,p = \frac{m.\,\theta.\,R.^4\,\pi}{2}$$

If T be the work transmitted to the revolving shaft per minute, and if (N) be the number of revolutions per minute, obtain the relation

$$T = \frac{4}{3} \cdot \frac{N}{R} \cdot P.\,p.$$

13. A shaft 6 inches in diameter is subjected to a twisting couple, which causes a resistance to torsion of 10,000 lbs. at a point 3 inches from the axis of the shaft; show that at a point $1\frac{1}{2}$ inches from the axis, the resistance of an element to torsion will be 5,000 lbs.

Find the twisting couple on the shaft.

14. The principals of a roof are 25 feet long and inclined to the vertical at 60°. Their ends are tied by two rods which meet under the vertex and are joined to it by a rod 6 feet long. The principals are loaded with a weight of $12\frac{1}{2}$ tons uniformly distributed. Find the compression of the principals, and the forces in all the rods. If the load of $12\frac{1}{2}$ tons be distributed over one principal only, find the forces in the members of the structure.

SECOND AND THIRD YEARS.

MACHINERY AND MILLWORK.

APRIL 23rd:—(*Time*, 4 *hours*).

Examiner,.....HENRY T. BOVEY, M.A., C.E.

1. What are the necessary forms for the bearings of the pieces of a machine?

What is the connection between the form of the bearings and the motion of the pieces?

2. Explain what is meant by the term "velocity-ratio," and show that when the velocity-ratio is constant, it is measured by comparing the entire spaces described in the same time, whatever changes the actual velocities of the bodies may have undergone during that time.

Prove that the velocity-ratio of the crank and connecting rod of an engine is equal to sin θ, θ being the angle turned through by the crank from an extreme position.

3. Show how to change a velocity of continuous rotation into one of reciprocation.

Show, by an arrangement of link-work, how to produce a return motion which shall be five times as quick as the advance.

4. Describe Oldham's coupling, and state the character of the motion transmitted by it.

5. Show that in the link motion of the steam engine, each eccentric produces its effect on the motion of the valve independently of the other, or nearly so.

6. A B and C D are two radius rods turning about centres of motion A and C, and connected by a link B D which in the mean position is perpendicular to A B and C D. Find the point in the connecting rod B D which moves most nearly in a straight line.

7. What are speed pullies?

When the pullies are driven by a crossed belt, the diameters of every pair of opposite pullies must be so adjusted that the belt shall be equally tight upon any pair, and the sole necessary condition is that the sum of the diameters of every pair of opposite pullies be the same throughout the set. Prove this, and find the length of the belt.

There are six speed pullies in each group, and the diameters of the extremes are 20 in. and 5 in.; find the intermediate diameters, assuming that the velocity-ratios of successive pairs of pullies follow in geometrical progression.

8. It is required to connect two parallel shafts whose distance apart is 5 feet by toothed wheels, so that the velocity-ratio may be 5; find the diameter of the pitch surfaces of the wheels.

9. Describe the practical method of shaping the teeth of a proposed wheel.

10. State the necessary condition which must exist in the two reaches of a belt when transmitting work between pullies.

A belt connects two pullies, which are making 60 revolutions per minute, and transmits 2 horse power; find the stress (in lbs.) in the belt, (dia. r, of pulley = 2 feet.

11. In a train of 7 axes—

"The 1st revolves once, while the 2nd revolves $1\frac{1}{2}$ times;"

"The 2nd drives the 3rd by a belt and pair of pullies whose diameters are 12″ and 6″ respectively;"

"The 3rd drives the 4th by a wheel of 60 teeth in gear with a pinion of 30 teeth;"

"The 4th drives the 5th by a wheel of 60 teeth in gear with a pinion of 20 teeth;"

"The 5th drives the 6th by a belt and pair of pullies whose diameters are 24″ and 6″ respectively;"

"The 6th performs a revolution in 10 seconds, and the 7th in 5 seconds;"

Find the ratio of the synchronal rotations of the first and last axis.

12. Define the terms "efficiency" and "counter-efficiency." If there be (n) machines, whose efficiencies are respectfully, $e_1, e_2, e_3, e_4, \ldots\ldots e_n$, and if T be the total work done, and U denote the useful work, prove that

$$T = \frac{U}{e_1\, e_2\, e_3 \ldots . e_n}$$

13. When a uniform shaft transmits work, show that its efficiency is given by $E = 1 - 2w \frac{f}{s} l$.

where (w) is the weight of a unit of volume of the material, (f) is the coefficient of friction, (s) is the greatest stress in the material, and (l) is the length of the shaft.

Does the inefficiency of a shaft increase in proportion to its length?

14. Describe the principle of the dynamometer.

Show how a "disc and roller" may be used to integrate the work measured by a dynamometer under a varying resistance.

15. Describe the pendulum governor.

16. Describe briefly one of the following:—"Stuffing Box," "Slide Valve," "Reversing Gear," "Lathe."

SECOND AND THIRD YEARS.

GENERAL PAPER.

APRIL 24TH:—(*Time*, 3 *hours*).

Examiner,.....HENRY T. BOVEY, M.A., C.E

1. What would be the cost of pointing a semicircular arch of 21 feet span, if its length were 12 feet, and the cost of the work 5 cents per square foot?

2. How can two points at the same level be found with a level instrument when the line of collimation is out of adjustment?

3. Explain clearly any one method by which you might proceed to make soundings so that the points where such soundings were taken might be afterwards marked on a map.

4. State what you know as to the nature, growth, and seasoning of timber.

5. Describe the method by which you would form an estimate of the weight of the girder before designing it, in order to allow its weight in the calculation of its strength.

Hence deduce the requisite calculations for a wrought iron girder, 100 feet in length, 10 feet in depth, and which has to carry a load of (1 ton per foot run.

6. Discuss, fully, the equation, $W = \frac{a.\ d.\ s.}{e}$

A gaff of red American pine 12 inches square is hinged to a mast at the inner end and suspended by a chain 6 feet from the outer end. It is inclined to the vertical at an angle of 60°. What weight will it safely bear at the extremity? (s = 1527 lbs.)

7. If R be the resilience of a unit of volume of any material under a simple stress f, prove that,

$$R = \frac{f^2}{2E} \quad \text{(E being the co-efficient of elasticity).}$$

If a bridge will support 40,000 lbs., and 1 lb. deflects it $\frac{1}{500,000}$ of a foot, what will be its ultimate resilience? Would it safely bear a jolt from ½ a ton falling ½ an inch?

8. Given the indicator diagram of a steam engine, show how a diagram may be formed which shall define the turning effort or couple exerted by the crank at all points of the stroke.

9. Describe the form of the teeth of a pair of spur wheels whose radii are 12 inches and 9 inches respectively; the flanks of the teeth to be radial, and the large wheel to have 24 teeth.

Also find the length of the teeth;—

1. When arc of approach = arc of recess.
2. When arc of approach = 0.
3. When arc of recess = 0.

10. Draw accurately the curve of spaces for the pin and slot, the distance between the centres of motion being (3) inches and the length of the crank (1) inch.

11. A beam resting on two supports is uniformly loaded:—

Show how to find the deflection at the centre.

Show that the deflections of similar beams are as the squares of any of the linear dimensions.

If d be the deflection of a beam whose length is l, prove that the deflection of a similar beam of length 3 l, is 9 d.

12. A rectangular beam of pitch pine is supported on bearings 10′ 9″ apart. The width of the beam was 14 inches, and its depth 15 inches. Under a load of 20 tons at the centre it deflected ¼ of an inch.

Find the co-efficient of transverse elasticity.

13. Two chain pumps in two hours raised to a height of 14′ 8″ a quantity of water weighing 3,865,269 lbs. The indicated horse power of the engine was 37·38. Find the efficiency of the arrangement.

The total quantity of water that could have passed through the cases per minute was equivalent to 17·5 horse power. Find the respective efficiencies of the engines and pumps.

14. A thin, hollow, spherical, elastic envelope, whose internal radius is

R, was subjected to a fluid pressure, which caused it to expand gradually until its radius became = R1.

Show that the work done was $E \frac{(R'-R)^2}{R.\ R'}$

E being the co-efficient of elasticity of the material of the envelope.

15. State the conditions of stability of a joint of masonry, and also the condition of strength.

16. State what is meant by the hydraulic mean depth of a channel.

What is the hydraulic mean depth of the water in a sewer of circular section, when the water rises to a height above the centre $= \frac{r}{\sqrt{2}}$ (r being the radius of the sewer.)

A long sewer of semicircular section has a uniform slope, show that in order that the water may attain the greatest velocity the stream must only partially fill the channel, and if A be the supplement of the angle subtended at the centre of the section by the unwetted portion of the circumference,

$$\text{Sin } A - A \text{ Cos } A = \pi.$$

JUNIOR YEAR.

DRAWING.

SATURDAY, APRIL 6TH:—MORNING, 9 TO 12.

Examiner,.....C. H. MCLEOD

1. Project orthographically:—

(*a*) A screw bolt, the section of the thread of which is an equilateral triangle. The diameter of the bolt is two inches and the pitch of its thread half an inch.

(*b*) A cube of 1·5 in. side when one face makes an angle of 30° with the horizontal, and a side of that face, which is in the horizontal, makes an angle of 60° with the vertical plane of projection.

(*c*) A right pyramid whose altitude is 3 in. and base a regular hexagon of 1·25 in. side, when penetrated by a cylinder of 1 in. diameter. The axis of the cylinder is horizontal, and bisects that of the pyramid at right angles. One edge of the base of the pyramid and the axis of the cylinder are parallel to the vertical plane of projection.

2. Show the development of the surface of the pyramid in question 1 (*c*).

3. Show, by its traces, a plane which contains any one of the faces of the cube in question 1 (*b*).

4. It is required to cut a slot in a piece of sheet iron so that the sides of

an angle—iron, which penetrates it, may make with it angles of 60 and 80 degrees. Show the necessary lines of section.

5. The walls of a building meet at an angle of 60°, the top of the one is horizontal and that of the other slopes upwards from the first at an angle of 30°. Find the inclination of the roof which rests directly on these walls.

6. Project the object before you isometrically.

MIDDLE YEAR.

DRAWING.

SATURDAY, APRIL 6TH:—MORNING, 9 TO 12.

Examiner,.....C. H. MCLEOD.

1. Project orthographically, a right pyramid whose slant height is 2·5 in., and base a quare of 1·5 inch side: (*a*) when the base makes an angle of 45°, and one side of the base an angle of 30°, with the horizontal plane; (*b*) when the side of the base which makes an angle of 30° with the horizontal also makes an angle of 45° with the vertical.

2. The sides of a tetrahedron are, A B=2·3, A D=1·8, A C=2·7; the angle B A C=60°, B A D=50°, and the angle between the planes B A D, B A C is 40°. Find the other parts of the solid.

3. A cube of 1 in. side, which rests on the horizontal, is surmounted by a plinth of 2 in. side; the edges of the cube and plinth are parallel to each other and their vertical axes coincide. Find the shadow cast by this object on the horizontal plane.

4. Project perspectively:—

(*a*) A flight of six steps, which have a tread of 9 in., a rise of 6 in. and are 8 feet wide. The steps are parallel to the picture plane and in the foreground; the nearest corner being 4 feet on the right of the *centre*.

(*b*) A regular pentagonal pyramid, the altitude of which is 12 feet and the length of the sides of the base 2 feet; when one side is at right angles to the picture plane and the angle of the base nearest the spectator is 5 feet on the right and 5 feet within the picture.

(*c*) The object before you.

5. Prove that the perspective projections of lines which are parallel vanish in the same point.

BA. APP. SC. EXAMINATION.

DRAWING.

SATURDAY, APRIL 6TH:—MORNING, 9 TO 12.

Examiner,.....C. H. MCLEOD.

1. Construct geometrically:—

(*a*) The involute of a circle, the diameter of which is 2 in.

(*b*) An hypocycloid, when the radii of the directing and generating circles are respectively 3 in. and 1·5 in.

(*c*) A triangle equal in area to any irregular figure of seven sides.

2. Project orthographically:—

(*a*) A cube of 2 in. side when one of its solid diagonals and also a diagonal of one face, is horizontal; the latter making an angle of 30° with the vertical plane.

(*b*) A right pyramid whose altitude is 3 in. and base a regular hexagon of 1·25 in. side, when penetrated by a cylinder of 1 in. diameter. The axis of the cylinder is horizontal, and bisects that of the pyramid at right angles. One edge of the base of the pyramid and the axis of the cylinder, are parallel to the vertical plane of projection.

3. Show the development of the surface of the pyramid, as penetrated, in question 2 (*b*).

4. If the base of the pyramid in question 2 (*b*) were placed at an angle of 30° to the horizontal and perpendicular to the vertical, find the traces of plane which, if drawn through the apex, would be parallel to the base of the pyramid.

5. Project the object before you isometrically.

6. Project perspectively:—

(*a*) A flight of six steps, which have a tread of 9 in., a rise of 6 in. and are 8 feet wide. The steps are parallel to the picture plane and in the foreground; the nearest corner being four feet on the right of the centre.

(*b*) A regular pentagonal pyramid, the altitude of which is 12 feet and the length of the sides of the base 2 feet; when one side is at right angles to the picture plane and the angle of the base nearest the spectator is 5 feet on the right and 5 feet within the picture.

(*c*) The object before you.

MIDDLE AND JUNIOR YEARS.

MATERIALS.

TUESDAY, APRIL 9TH:—MORNING, 9 TO 12.

Examiner,.....C. H. MCLEOD.

1. What are the different forms of decay to which timber is subject, and the causes which lead to each of them?

2. Describe any artificial process of seasoning known to you.

3. Mention some of the preserving agents which are applied to timber, and classify them as to their mode of action.

4. How may beech be distinguished? (*a*) Where may it be used advantageously, and why? (*b*) What is its chief defect?

5. Where capacity to resist cross-breaking is the only consideration, what Canadian timber would you employ?

6. Mention some of the uses to which white pine is put. (*a*) What is the maximum size generally obtainable?

7. What is the distinguishing feature of pitch pine? (*a*) What is its strength as compared with white pine? (*b*) Where would you use it in preference to all other wood?

8. In what position, only, should hemlock be used?

9. What timber is best adapted for railway sleepers? Why?

10. How does the deflection of a given material vary, within the elastic limit? (*a*) How would you ascertain the constant to be used in the formula?

11. Why is the resistance to tearing so much greater than to cross-breaking? In both cases the particles of the material must require the same force to separate them.

12. What varieties of pig-iron are best adapted for foundry and forge purposes, and also for the manufacture of Bessemer steel?

13. To what mechanical treatment is the puddled ball subjected in order to convert it into merchantable iron?

14. Name the principal methods for the production of steel and describe one of them.

15. What is the effect of tempering in oil?

16. What is internal strain? (*a*) To what is it due? (*b*) How may wrought iron be relieved of it?

17. When there is internal strain in a metal, what is the effect of stress, short of incipient rupture?

18. What is the relation between the resistance offered and the rapidity with which stress is applied? (*a*) What influence would change in temperature have on this relation? (*b*) In general, what is the form given to the portions of machines subject to blows?

19. How does the presence of silicon or phosphorus in iron affect its strength?

20. What kind of iron welds most perfectly? (*a*) What is the best form of joint for welding?

21. How does cold affect the resilience of iron?

22. What appearance does the fracture of iron present? (*a*) When broken at ordinary temperatures, by a gradually increased stress? (*b*) At a low temperature? (*c*) By a blow? (*d*) What index does the fracture give as to the quality of the iron?

23. Classify the substances obtained by calcining different limestones and state the properties of each.

24. Describe Hoffman's annular kiln for lime or brick burning.

25. What takes place in the setting of a mortar: (*a*) in which there is an excess of alumina? (*b*) in which there is an excess of silica?

26. What mistakes are commonly made in preparing mortar? (*a*) How should mortar be prepared?

27. What effect has sand on the strength of mortars: (*a*) when made from pure lime? (*b*) when made from a cement?

28. What is the composition of the ordinary mortar used in house building?

29. What is concrete? (*a*) How should it be prepared?

30. What influence has the specific gravity of Portland cement upon its strength? (*a*) What is the minimum weight per bushel and tenacity per square inch sectional area, which you would specify for, on important works?

31. What precaution should be taken when Portland cement concrete is required to set under water?

32. Mention some of the uses to which concrete is put. (*a*) Where is it particularly valuable? (*b*) How may it be used advantageously in street paving.

33. What is asphalt? (*a*) How is it prepared for pavements?

34. Name the materials exhibited.

JUNIOR YEAR.

SURVEYING.

SATURDAY, APRIL 13TH:—MORNING, 9 TO 12.

Examiner,.....C. H. MCLEOD.

1. Describe the Optical square.

(*a*). How would you test its accuracy?

2. Give an example of two distinct methods of keeping the notes of a chain survey.

3. It is required to produce a line beyond an obstacle without the aid of an angular instrument. Apply the method of "transversals" to the solution of this problem.

4. What is the use of the vernier which is sometimes placed on the surveyor's compass?

5. What is "dip"? How is its effect neutralized in the compass?

6. Convert 2·5 *arpents* into acres.

7. Draw a diagram of a vernier scale marking 23 minutes and 50 seconds.

8. Describe the permanent adjustments of the transit. (*a*) Which of these may be omitted when it is not necessary to reverse the telescope?

9. How may an angle be measured to ten seconds, with an instrument which only reads to minutes?

MIDDLE YEAR.

(CIVIL AND MINING ENGINEERING.)

SURVEYING.

SATURDAY, APRIL 13TH:—MORNING, 9 TO 12.

Examiner,.....C. H. MCLEOD.

1. How would you conduct the survey of a *shoal* when land stations are not available?

(*a*). Describe the operations in detail and the methods which you would employ in such a survey.

2. What is the essential adjustment for levelling instruments?

(*a*). Describe the permanent adjustments usually applied to the Y level.

3. In order to attain the greatest possible accuracy in levelling what circumstances should govern the length of sights? (*a*) In carrying a line of levels across a wide and deep ravine, where it is impossible to secure a long backsight, how would you proceed?

4. Show, by example, a method of keeping the field notes in setting out the work on a line of road.

5. Obtain an expression for the difference in elevation of two points; when the distance between them and the angle of altitude or depression at both stations is known.

(*a*) The angle of elevation of A as observed from B is 1° 18′; the depression of B from A, is 1° 42′ and the horizontal distance between A and B is 34·5 miles. Calculate the elevation of A above B.

6. In barometric levelling, show that

$$H = K (\log R - \log r) \left(\frac{T + t - 64^\circ}{900} + 1 \right)$$

Where K is a constant quantity; H the difference in elevation between two stations; R and r, the readings of the barometer at the stations corrected to 32° Fah.; and T and t the corresponding temperatures of the air at the stations.

7. In what does underground surveying differ from surveying operations on the surface? (*a*). How would you connect the survey of a mine which is entered by a shaft with an overground survey?

8. Describe the method of conducting a geodetic survey.

9. Upon what principle does a base measuring apparatus, which is unaffected by change of temperature, depend?

10. Describe the process of measuring a "base."

11. The area of a triangle is 600 square miles, calculate its spherical excess.

12. The bearing of a line A B is N 15° E. and of a line B C, S. 75° E., A B is 2 miles long and declines at 5°; B C is 2·5 miles long and declines at 3° Calculate the position of C with regard to A, taking into account the curvature of the earth.

MIDDLE YEAR.

(MINING COURSE.)

(ALSO HONOUR STUDENTS IN GEOLOGY.)

BLOWPIPE ANALYSIS.

SATURDAY, APRIL 6TH:—MORNING, 9 TO 12.

Examiner.....B. J. HARRINGTON, B.A., PH.D

1. In what way is the degree of fusibility of a mineral determined?

2. What are the phenomena to be observed when substances are heated in closed tubes?

3. Describe the coatings produced upon charcoal by the oxides of Arsenic, Antimony, Lead and Cadmium.

4. How would the blowpipe enable you to distinguish between Apatite and Pyroxene, Cassiterite and Rutile, Cinnabar and Red Hematite?

5. Give the blowpipe characters of any four of the following minerals:

Menaccanite,	Celestite,
Pyrrhotite,	Siderite,
Natrolite,	Malachite,
Tourmaline,	Fluorite.

6. What conclusions would you draw with regard to minerals exhibiting the following characters:

(1) Metallic lustre, fuses readily, gives a sulphur reaction, and upon charcoal gives malleable metallic globules and a yellow coating.

(2) Lustre metallic, infusible, amethystine borax bead, with hydrochloric acid evolves chlorine, contains little or no water, colour iron black.

(3) Lustre not metallic; decrepitates, tinges the flame green and fuses at 3; gives a sulphur reaction, and after ignition colours turmeric paper brown.

(4) Lustre not metallic, infusible, reacts alkaline after ignition, dissolves with effervescence in dilute acids, and has rhombohedral cleavage

7. What are the special uses of the following reagents: Microcosmic Salt, Calcic Fluoride, Ammonic Molybdate, Cobaltous Nitrate, and metallic Tin.

Determination of minerals with the blowpipe in the Laboratory.—Afternoon, 2 to 5.

Ba. App. Sc. EXAMINATION.

METALLURGY,

Tuesday, April 16th:—Afternoon, 2 to 5.

Examiner,..... .....B. J. Harrington, B.A., Ph.D.

1. What is the object of roasting Galena before smelting it? Describe briefly, and compare the chief methods of doing so.

2. State the principles upon which the Pattinson & Parkes processes for desilverizing lead are respectively based, and point out the comparative merits of the two processes.

3. Describe the English and German cupellation hearths, and state some of the considerations that should guide a metallurgist in selecting one or other of them.

4. Describe the Mexican amalgamation process, and give the principal reactions that are supposed to occur in it. What advantages does it possess over the European process?

5. Give a brief account of the Ziervogel process, stating what substances it is best adapted to treat; and point out any advantages it may possess over the usual furnace processes for extracting silver.

6. Describe briefly the more important ores of iron, and point out their relative values for the manufacture of particular kinds of iron.

7. What are the principal modifications which have been introduced in the construction of modern blast furnaces, and what their objects?

8. Explain what is meant by the burden of a furnace, and point out the advantages derived from the employment of a hot blast in the manufacture of cast iron.

9. Describe the construction of Siemens' regenerative gas furnace as used in the production of steel according to the Siemens-Martin process.

10. Point out the differences, chemical and physical, between grey and white pig iron.

11. State what you know about the specimens exhibited.

Ba. App. Sc. EXAMINATION.

MINING.

Saturday, April 20th:—Morning, 9 to 12.

Examiner,.....B. J. Harrington, B.A., Ph.D.

1. Point out some of the principal differences commonly observed in the composition of metalliferous veins at different depths and along their strike.

2. For the purposes of mining, what are regarded as thick and what as thin lodes? Describe the cross-cut method for the exploitation of the former.

3. State the conditions which determine the dimensions and site of a shaft, and describe the method of Kind & Chaudron for sinking and tubbing shafts in watery ground.

4. Describe fully the different parts of the timbering of a gallery, and state under what conditions the timber is usually found to last longest.

5. Describe the man-engine, pointing out its advantages as compared with other appliances for raising miners in shafts.

6. State the circumstances under which overhand or underhand stoping may be followed with most advantage.

7. What are the best forms and dimensions of rails for under-ground roadways.

8. Point out the differences between slow and shattering explosives, and state in what cases the one or the other may be used most advantageously.

9. Describe the construction and use of a rotatory buddle and a shaking table.

10. Explain the following terms: Hade, attle, balance-bob, plunger, nog and gob.

MIDDLE YEAR.

ASSAYING.

FRIDAY, APRIL 26TH:—MORNING, 9 TO 11.

Examiner,.....B. J. HARRINGTON, B.A., PH.D.

1. Describe fully the volumetric assay of Zinc Ores with Sodic Sulphide.

2. In what ways may Titanic Acid be detected in Iron Ores, and how is the quantity estimated?

3. Describe Marguerite's method for the determination of Iron, and point out its advantages or disadvantages as compared with Penny's method.

4. Describe the method of Fresenius and Will for the valuation of Manganese Ores.

5. How would you determine the amount of Gold, (1) in auriferous Iron Pyrites, and (2) in quartz free from Sulphides?

6. What charges would you employ in the scorification assay for Silver of specimens of Galena, Copper Pyrites, Zinc Blende and Stibnite.

7. Describe any method for the determination of Sulphur in Coals.

8. In determining the value of a coal, what are the principal points to be ascertained?

FACULTY OF LAW.

SESSIONAL EXAMINATIONS.

FIRST YEAR.

ROMAN LAW.

Examiner,.....PROF. TRENHOLME.

1. Into what periods would you divide the history of Roman Law, and give the reasons for the division you adopt?

2. What means have we of forming some idea of the primitive Roman Constitution?

3. To what era in legal history does the legislation of the XII tables belong, and point out the importance of such legislation?

4. Give some account of the *Corpus Juris Civilis*, and of the works forming it.

5. How do you account for the Roman Law forming the basis of a large portion of our Law?

6. What are some of the great agencies in the amelioration of law, and point out the time and manner of their operation?

7. Give some account of the origin and nature of the great Roman Magistracies, particularly of the Praetorship.

8. What are the great natural family relations, and what their extensions in Roman Law and what in our Law?

9. What were the different kinds of *Tutelæ* in Roman Law; what in our law, and point out what security in each case the Minor enjoys?

10. What was the probable nature and what some of the causes of the change in the Roman Constitution known as the Servian Constitution?

11. What were *leges, plebiscita, senatus consulta, principum placita, responsa prudentum.*

12. In what way did Grecian culture and philosophy affect Roman Law, and at what period?

(Only 8 questions to be answered.)

FIRST YEAR.

CIVIL CODE.

Examiner,.....PROF. H. F. RAINVILLE.

1. Par quelles lois sont régis les biens meubles et immeubles situés en Bas-Canada?

2. Suivant quelles lois doivent être faits les actes quand à leur forme?

3. Comment s'acquiert la qualité de sujet britannique?

4. Quels sont les effets de la mort civile?

5. Que doit contenir l'acte de mariage?

6. Quels sont les droits et les obligations du curateur à l'absent?

7. Quel prêtre ou ministre est compétent à célébrer un mariage?

8. Pour quelles causes une femme peut-elle demander la séparation de corps?

FIRST YEAR.

LEGAL HISTORY.

Examiner.....M. LAREAU.

1. Quelles sont les origines du droit canadien ?

2. Comment se divisait le droit français avant 1663 ?

3. A quelle date remonte l'introduction de la Coutume de Paris dans la colonie ?

4. De quoi traite l'ordonnance de 1667 ; a-t-elle été enregistrée au Conseil Supérieur de Québec ?

5. Dites la date de la création du Conseil Supérieur de Québec ?

6. Qui formait partie (originairement) du Conseil Supérieur de Québec?

7. Considérez-vous que les ordonnances des Rois de France, postérieures à la date de la création du dit Conseil, dussent y être enrégistrées pour avoir force de loi dans la colonie ; dites vos raisons pour ou contre ?

8. Dans quelle année les lois criminelles anglaises ont-elles été introduites légalement en Canada ?

9. Rappelez quelques-unes des principales dispositions contenues dans l'acte constitutionnel de 1774 ?

10. Rappelez quelques-unes des principales dispositions contenues dans l'acte constitutionnel de 1791 ?

FIRST YEAR.

CIVIL LAW.

Examiner.....M. ROBIDOUX.

1. Comment sont déférées les Tutelles ?

2. Par qui peut être convoqué le conseil de famille ? Et devant qui peut il être convoqué ?

3. Combien de Tuteurs peuvent être nommés à un Mineur ?

4. Quelles sont les fonctions du subrogé Tuteur ? Quelle est sa responsabilité ?

5. A la demande de qui un Mineur peut il être émancipé ? Par qui peut-il être émancipé?

6. Quand un Majeur ou Mineur émancipé, doit-il être interdit? Rapportez la procédure pour prononcer l'interdiction?

7. Combien y a-t-il d'espèces de curatelles? A qui donne-t-on un Curateur?

8. Quels sont les pouvoirs du Curateur?

9. A quels biens nomme-t-on des Curateurs?

10. A qui nomme-t-on un conseil judiciaire? Par qui est-il donné? Quels sont ses pouvoirs?

FIRST YEAR.

CIVIL PROCEDURE.

(3 TO 4.30 P.M. FOR ORDINARY; AND 3 TO 5.30 P.M. FOR HONOURS.)

Examiner,.....M. HUTCHINSON, B.C.L.

1. How could the first of May next be declared a non-juridical day?

2. What formalities must be observed in order that a minor may institute an action for the recovery of damages suffered by him?

3. Can a married woman sue her husband? If so, in whose name, and by what authority?

4. Can a contract entered into in New York between two Germans be enforced in our courts? If so, under what circumstances?

5. Can a contract entered into at Montreal between two Chicago merchants be enforced in our courts? If so, how would you summon the Defendant?

6. In how many ways can you summon a Defendant residing in Nova Scotia to appear before our courts? Explain each.

7. Under what circumstances can a party plead in *forma pauperis*? In what case would such party be refused leave to so plead?

8. Can a husband residing in New York prosecute an action in our courts for separation from bed and board against his wife residing in Montreal?

9. How many kinds of preliminary pleas are there? Within what delay must they be fyled?

10. Explain the nature of a declinatory exception.

11. What is the effect of an attorney neglecting to elect domicile?

12. What must the conclusions of a suit contain? Is a prayer for justice in the premises sufficient?

N.B. (Any eight of the above twelve questions to be answered.)

FIRST YEAR.

CRIMINAL LAW.

Examiner, ... MR. ARCHIBALD.

1. What is the distinction between crimes and private injuries?

2. Give the exact technical signification of the word *malice* as used in criminal law.

3. What is the meaning of the maxim "Malitia supplet aetatem," and what exceptions are there to it?

4. What are the rules of law in relation to the responsibility of a *femme couverte* for criminal acts?

5. Mention and define the principal offences against the coin, classing each either as felony or misdemeanor, as the case may be.

6. State the several punishments awarded to the offences mentioned in the last question.

7. Give a short *resumé* of the law relating to the effect of provocation in a case of homicide.

8. Under what circumstances, if at all, are medical men responsible criminally for the death of persons under their care?

9. Define larceny with precision.

10. Explain in detail the different elements of larceny as contained in your last answer.

11. Is a clerk in a bank who receives money from a customer, puts it in the till, and afterwards takes it out and appropriates it, guilty of larceny, or of some other, and what offence? and give the reason of your opinion?

12. What is the nature of the *entry* which forms an element in the crime of Burglary?

(N. B. Students have the right to answer any 8 questions which they may choose out of the foregoing.)

SECOND AND THIRD YEARS.

INTERNATIONAL LAW AND COMMERCIAL SALES.

Examiner,.....PROFESSOR KERR.

1. What is a contract? What is a contract of sale?

2. What are the principal obligations of the Vendor? What are the principal obligations of the Vendee?

3. Whats is public International Law? What is private International Law?

4. State the rights of Belligerents. Detail the rights of Neutrals.

5. What is a lien? When does it exist?

6. What is *stoppage in transitu?* In what does it differ from lien?

7. What is the effect of stoppage in transitu?

8. What change has been effected in the rights and privileges of the unpaid vendor by the Insolvent Act of 1875?

9. What is Blockade? How and by whom can it be exercised?

10. From what law do obligations derive their force? Does the lex fori exercise any influence upon obligations? If yea, in what manner?

11. Point out the differences existing between the 17th section of the Statute of Frauds and Art. 1235 C. C. L. C.

12. What is Extradition? What changes have recently been introduced into the interpretation of Extradition Treaties as to the trial of offenders extradited for an offence other than the one for which the surrender had been demanded?

SECOND AND THIRD YEARS.

ROMAN LAW.

(3 TO 4½ P.M. FOR ORDINARY; AND 3 TO 5½ P.M. FOR HONORS.)

Examiner,.....PROF. TRENHOLME.

1. Give in chronological order the different kinds of *testamenta*, and point out some of the more important changes therein?

2. Whence do we derive our law of willing, and the different forms of wills prevailing in Lower Canada?

3. What was *substitutio* and what were *fidei commissa* in Roman Law, and when and why were the latter introduced?

4. What was the order of succession established by the XII tables, and what by Justinian?

5. A person dies worth 60,000 *aurei*, leaving surviving him a father, a maternal grandmother, a full brother, three nephews, children of a deceased sister of the full blood, and also a brother of the half blood; how would the 60,000 *aurei* be divided in Roman Law under Justinian's legislation, and how in our law?

6. Give an account of the different *beneficia* enjoyed by heirs and by creditors in Roman Law, and point out analogies in our law.

7. What are the different kinds of legatees in our law, and what their liability for the debts of the testator?

8. What was the *legitima portio* of the Roman Law, and had or have we any thing similar in our law?

N.B. 8 Questions for Ordinary, all for Honors.

9. Give some account of the nature and causes of the change known as the Servian Constitution, and of the means by which a judgment may be formed on the subject.

10. Give some account of the *jus gentium* of earlier and later Roman Law, and of the influence it exerted in Roman Law.

11. Define, *leges*, *plebiscita*, *principum placita*, *jus honorarium*, *responsa prudentum*, *manus*, *mancipatio*, *dominium quiritarium*, *usucapio*.

12. What are the natural family relations, and to what extent do they come under the domain of law? What were their artificial extensions in Roman Law, and what in our law

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SECOND AND THIRD YEARS.

CIVIL LAW.

Examiner.....M. LAREAU.

1. Donnez la définition du contrat de louage?

2. Quelles sont les principales obligations du locateur?

3. Quelles sont les principales obligations du locataire?

4. Comment se termine le bail d'une maison lorsque la durée n'en est pas fixée?

5. Le voiturier peut-il retenir la chose transportée jusqu'au paiement du voiturage et du fret ?

6. Dans quels cas les entrepreneurs et architectes peuvent-ils réclamer des extras ?

7. Donnez la définition du contrat de transaction ?

8. Donnez la définition du contrat de cautionnement.

9. Dites quel est l'effet du cautionnement entre les co-fidé-jusseurs ?

10. Mentionnez les sources d'où le droit canadien tire son origine ?

SECOND AND THIRD YEARS.

CIVIL LAW.

Examiner,.....PROF. RAINVILLE.

1. Comment des objets mobiliers peuvent-ils devenir immeubles par destination ?

2. A qui appartiennent les isles qui se forment dans les fleuves ou les rivières ?

3. Quels sont les obligations de l'usufruitier ?

4. Comment s'éteint l'usufruit ?

5. Quels sont les droits et les obligations des propriétaires voisins ?

6. Combien y a-t-il de formes de testament dans notre droit ?

7. Quels biens peut-on donner par testament ?

8. Le legs d'une chose qui n'appartiendrait pas au testateur est-il valide ?

9 Comment un testament peut-il être evoqué

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SECOND AND THIRD YEARS.

CIVIL PROCEDURE.

(3 TO 4.30 P.M. FOR ORDINARY; 3 TO 5.30 P.M. FOR HONOURS.)

Examiner,.....M. HUTCHINSON, B.C.L.

1. When can a judgment be executed in the name of a deceased person?

2. Under what circumstances may a judgment be executed immediately after being rendered?

3. What is the effect of a garnishee refusing to make his declaration when legally called upon, of the amount he owes the defendant?

4. What real rights does a sheriff's sale not discharge property from?

5. How is an abandonment of property by a debtor arrested under a *capias* effected?

6. Within what delay can a creditor contest the statement of such debtor's abandonment? And on what grounds?

7. Have the creditors of such debtor any claim upon him after he has abandoned his property and obtained his discharge from imprisonment?,

8. How is coercive imprisonment carried into execution?

9. What penalty does a defendant subject himself who locks his doors against a bailiff to prevent the seizure of his effects?

10. Draw up a form of affidavit for the issue of a writ of *capias* on the ground that the defendant is about immediately to leave the country?

11. From what court should a *capias* issue based on a debt of $50? If the *capias* be quashed, before what court must the plaintiff proceed to judgment on his debt? If the capias be not executed, before what court must the plaintiff proceed to judgment on his debt?

12. How many kinds of bail may the defendant give? Explain briefly the nature of each.

N.B.—Any eight of the above twelve questions for Ordinary, the whole twelve for Candidates for the Medal.

SECOND AND THIRD YEARS.

COMMERCIAL LAW.

Examiner,.....M. ROBIDOUX.

1. Quelles sont les créances privilégiées sur les bâtiments marchands?

2. Quelles sont les créances privilégiées sur la cargaison?

3. Quelles sont les créances privilégiées sur le frêt?

4. A quelle responsabilité est soumise envers les tiers une personne qui affrête un bâtiment pour en avoir le contrôle et le naviguer seule?

5. Quand le maître peut-il vendre le bâtiment sans l'autorisation expresse des propriétaires?

6. Qu'est-ce que le connaissement? Par qui est-il signé? En combien d'exemplaires? Que doit contenir le connaissement?

7. Qu'entend-on par frais de surestaire?

8. Quels sont les droits du Capitaine sur les marchandises transportées sur son bâtiment et dont le frêt n'est pas payé?

N. B.—Tous les étudiants devront répondre aux questions ci-dessus. Les concurrents pour la médaille devront répondre aux questions suivantes.

9. Quelles sont les marchandises qui peuvent être abandonnées pour frêt? Et dans quel cas peuvent elles être ainsi abandonnées?

10. Quel prix le maître est-il obligé de payer pour les marchandises qu'il a été contraint de vendre pour subvenir aux réparations, victuailles et autres nécessités pressantes du bâtiment arrivé à sa destination? Le frêt est-il dû sur les marchandises dans ce dernier cas? Quel prix est dû pour les marchandises, si le bâtiment périt avant d'arriver à destination?

11. Quand une demande de cession peut elle être faite à un commerçant?

12. Quand un débiteur commerçant est-il reputé en faillite?

THIRD YEAR.

CRIMINAL PROCEDURE.

Examiner,.....Mr. ARCHIBALD

1. Define Criminal Procedure, and state what it comprises.

2. Where should crimes be tried, and give exceptions?

3. In what cases may arrests be made by private persons?

4. In what cases may arrests be made by an officer without a warrant?

5. What is the procedure to be adopted to obtain a warrant of arrest on a charge of Felony?

6. What should an officer holding a warrant to arrest a man in one district do, in case the accused escapes into another district?

7. Under what circumstances may a warrant issued for the arrest of a person in one district be executed in another without being *backed?*

8. When a man is arrested on a charge of Felony, what course must be followed to secure his committal?

9. Explain the law relating to bail by one or two magistrates.

10. How is bail obtained in case it is refused by the magistrate?

11. How are the Petit jury lists made?

12. What are the essentials of an indictment?

N. B. Ordinary students may answer any 8 of the foregoing questions. Medal students are to answer the whole 12.

FACULTY OF MEDICINE.

M.D.,C.M., PRIMARY EXAMINATION.

BOTANY.

SATURDAY, MARCH 16TH:—MORNING, 9 TO 12.

Examiner, ... J. W. DAWSON, LL.D., F.R.S., &c.

1. What are the principal constituents of the Ashes of Plants, and what relations do they establish between Plants and Soils?

2. Explain the relations of Carbonic Acid and Ammonia to the nutrition of the plant.

3. Describe the leading kinds of Inflorescence.

4. Describe minutely the Stamen, with the terms applied to its parts and positions relatively to the other parts of the flower.

5. Describe the structures in the Ovule, the process of fertilization, and the parts of the mature seed.

6. Define the terms Sprangium and Spore, and explain the origin and nature of these organs, with examples.

7. Explain the distinction between Dehiscent and Indehiscent Fruits, and between Albuminous and Exalbuminous Seeds.

8 State the division of Plants into Classes, and define each of these.

9. Illustrate the arrangement of Plants in Species, Genera, and Orders, by any Canadian example.

10. State the characters, with illustrative examples, of any one of the following orders,—*Rosaceæ*, *Sapindaceæ*, *Lycopodiaceæ*.

CHEMISTRY.

THURSDAY, MARCH 21ST :—3 TO 5, P.M.

Examiners,..... { PROFESSOR CRAIK, M.D.
" GIRDWOOD, M.D.

1. What constitutes the essential differences between a solid, a liquid, and a vapour; and what part does heat play in the passage of a body from one of these conditions to another?

2. Describe a direct or primary current of voltaic electricity, and also a secondary or induced current, and point out the principal differences between them.

3. State the proportions by volume of the different gases which enter into the composition of (1) Hydrochloric Acid, (2) Water, (3) Ammonia, and (4) Methane; and give the molecular volume of each of these compounds.

4. What are the chief chemical characters of (1) Acids, (2) Bases, and (3) Salts? Give formulæ for two of each, and also formula for a monobasic, a dibasic, and a tribasic acid.

5. In what form do metals generally exist in nature, and with what substances are they most commonly found combined? Name some of more common processes by which they are reduced. Write chemical formulæ showing the ultimate composition of the principal salts of iron and mercury, and give the usual tests resorted to for their detection.

6. State the principal differences between organic and inorganic compounds. Give a formula for (1) a saturated hydrocarbon, (2) an alcohol, (3) an aldehyde, (4) a haloid ether, and (5) an organic acid; and show the steps by which an alcohol is converted into an organic acid.

MATERIA MEDICA.

THURSDAY, MARCH 21ST :—10 TO 12, A.M.

Examiner,.....PROFESSOR WRIGHT, M.D., L.R.C.S.E.

1. How are the following Antiperiodics got, viz.,—Anarcotina,—Ferri et Quinæ Citras,—Liquor Arsenicalis,—and Tinctura Cinchonæ Composita.

2. Enumerate the various Counter-irritants, and append some general remarks upon the *modus operandi* and peculiarities of the classes into which they have been sub-divided.

3. Name the chief Purgatives that are Cholagogue, and state the doses in which their preparations should be given.

4. Specify the general remedies which act on the pupil and on the symptoms that may co-exist in each case from implication of the Brain or Spinal Cord.

5. What are the rules that should be observed in prescribing Argenti Nitras,—Acidum Arseniosum,—Colchicum,—Digitalis, and Opium?

6. Mention the Antidotes for Corrosive Sublimate, Sulphuric Acid, and Tartar Emetic with the general line of treatment to be pursued in cases of poisoning by these substances.

INSTITUTES OF MEDICINE.

FRIDAY, MARCH 22ND:—10 TO 12 A.M.

Examiners,..... { PROFESSOR DRAKE, M.D.
PROFESSOR OSLER, M.D.

1. The structure of Bone.

2. Colourless blood corpuscles.

3. The conditions under which coagulation takes place in the living body.

4. Condition of chambers and valves of the heart during the 2nd sound.

5. The fate of the nitrogenous elements of a meal.

6. The process of absorption in the intestines.

7. The minute anatomy of the Kidney (briefly).

8. Describe the effects of a lesion affecting the facial nerve, (1) at the stylo-masloid foramen (2), in the Aqueductus Fallopii, (3), in the hemisphere.

9. Trace the conrse of the sound waves to the organ of Corti.

10. Explain the conditions Presbyopia, Myopia, Hypermetropia and Astigmatism.

11. The contents of a ripe Graafian follicle.

12. The formation of the placenta.

ANATOMY.

FRIDAY, MARCH 22ND, 3 TO 5, P.M.

Examiner, ... PROFESSOR SCOTT, M.D.

1. What muscles are attached to the Temporal bone?

2. What are the boundaries and contents of the Maxillo-pharyngeal space?

3. What are the relations and branches of the Internal Iliac artery?

4. What muscles are supplied by the following nerves:—median, ulnar, musculo-spiral and posterior inter-osseous?

5. Where is the spheno-palatine ganglion situated? Give its branches and the course of the Vidian.

6. What are the boundaries of the 4th ventricle of the brain?

M.D., C.M., FINAL EXAMINATION.

MONDAY, MARCH 25TH:—10 TO 12, A.M.

OBSTETRICS.

Examiner,.....PROFESSOR D. C. MACCALLUM.

1. Give the symptoms of Post-partum Hæmorrhage from Inertia of the Uterus before the expulsion of the placenta, and the treatment to be adopted in such a case.

2. Give the symptoms and treatment of Hæmorrhage due to morbid adhesion of the placenta.

3. What circumstances may render version of the child dangerous or impracticable in a shoulder presentation, and what means would you adopt to deliver the patient?

4. How would you manage a Labour rendered tedious by inefficient Uterine action?

5. What irregular positions of the Head of the Child may render labour difficult, and how may they be corrected?

6. Mention the different causes of severe After-pains, and state what you would do for their relief.

7. What morbid conditions of the Nipple are met with during lactation, and how are they best relieved?

8. Give the symptoms of Hysteritis during pregnancy, and mention the points of diagnosis between it and other affections with which it might be confounded.

9. Give the symptoms and treatment of Abortion.

10. Give the treatment of Ophthalmia Neonatorum.

THEORY AND PRACTICE OF MEDICINE.

MONDAY, MARCH 25TH :—3 TO 5, P.M.

Examiner,..... .....PROFESSOR R. P. HOWARD, M.D.

1. Describe the treatment of Typhoid Fever, giving the doses of the remedies and the indications for their employment.

2. Name the specific lesion, if any, in each of the Continued Fevers, and enumerate the secondary lesions common to all prolonged severe fevers.

3. The diagnosis between Tonsillitis and Diphtheria ?

4. Sketch the treatment of Diphtheria and its sequel.

5. What are the forms of Bright's Disease, and what are the causes and symptoms of the Cirrhotic Kidney ?

6. Relate and explain the physical signs of Hepatization of the Lungs.

7. The morbid anatomy of Pulmonary Collapse and of Lobar Pneumonia ?

8. When, where and how would you evacuate pleuritic effusion ?

9. Name the affections due to Sclerosis of the Spinal Cord, and state the leading symptoms of Locomotor Ataxia.

10. The treatment of mechanical obstruction of the bowels ?

11. Define Embolism and Thrombosis, and give the conditions productive of them.

12. Give the signs of Aortic Regurgitation, and explain its dangers.

MEDICAL JURISPRUDENCE.

TUESDAY, MARCH 26TH :—10 TO 12, A.M.

Examiner,.....PROFESSOR GARDNER, M.D.

1. Give the symptoms, course, terminations, prognosis and legal relations of Acute Mania. Give also the legal relations of Delirium Tremens and Drunkenness.

2. Enumerate the various duties of the medical man when called to see the body of a person found dead under suspicious circumstances.

3. Enumerate the causes of sudden natural death.

4. Describe fully the methods most recently proposed for the diagnosis of human from animal blood.

5. What is the cause of death in hanging, strangulation, suffocation and drowning, respectively?

6. Describe the symptoms, ordinary and exceptional, of Opium-poisoning mention the diseases with which it may be confounded, and state the main points of difference.

PRINCIPLES AND PRACTICE OF SURGERY.

TUESDAY, MARCH 26TH :—3 TO 5, P.M.

Examiner,..... .....PROF. G. E. FENWICK, M.D.

1. Describe the degenerative changes met with in the coats of arteries;—to what are these changes due, and to what do they tend?

2. Describe the various local means of treatment in hæmorrhage from the wound of an artery.

3. What lesions are liable to occur in injuries of the head; and what complications are apt to follow?

4. How would you treat depressed fracture of the skull, and what symptoms would indicate the necessity for surgical interference?

5. With what may fractures be complicated?

6. What is a *carbuncle?* Mention the clinical features, the class of patient in whom it usually occurs, and its treatment.

7. What do you understand by in-grown toe-nail? Mention the causes and treatment of this affection.

8. What part of the common carotid artery would you select for ligation? Describe the operation.

9. Mention the coverings of femoral hernia. Where is the stricture situated in cases of strangulation, how would you relieve it, and what are the dangers?

10. How does dislocation on to the dorsum ilii occur? Mention the symptoms, position of the limb, and process of reduction by the rotator method.

THEORETICAL CHEMISTRY.

(SPECIAL EXAMINATION FOR SUTHERLAND GOLD MEDAL).

THURSDAY, MARCH 28TH:—3 TO 6, P.M.

Examiners,..... { PROFESSOR CRAIK,
" GIRDWOOD.

1. Give a statement of the laws of chemical combination:—(1) in definite proportions, (2) in multiple proportions, (3) in equivalent proportions, (4) the law of combination by volume, and cite an example illustrative of each.

2. Explain the meanings of the terms *amorphous*, *dimorphous*, *isomorphous*, *allotropic* and *isomeric*, and also the meanings of the terms *homologous* and *isologous series*.

3. State the number of classes into which the elements have been divided with reference to their equivalency or atomicity, citing an example of each class; and explain how an element may act with different degrees of equivalency.

4. Describe the process of extracting phosphorus from bones, giving formulæ for the different reactions which occur. Also give the formulæ for the following compounds of Phosphorus:—(1) Hypophosphorous Acid, (2) Phosphorous Acid, (3) Phosphoric Acid, (4) Pyrophosphoric Acid, (5) Metaphosphoric Acid.

5. Describe the principal ore of Lead, and give an outline of the process for extracting the metal. Write the formulæ for two of its oxides and two of its salts, and describe the tests by which the presence of the metal is recognized.

6. Give formulæ for a primary, a secondary, and a tertiary monamine. To which of these do the majority of the vegetable alkaloids belong? State the general principles involved in the usual processes for extracting the alkaloids from the vegetable tissues which contain them.

EXAMINATION FOR ASSOCIATE IN ARTS AND SCHOOL CERTIFICATE.

PRELIMINARY SUBJECTS.

GEOGRAPHY.

MONDAY, MAY 20TH:—AFTERNOON, 2 TO 4.

Examiners, ... { J. CLARK MURRAY, LL.D.
REV. ROBERT LAING, M.A.

1. Define what is meant by (*a*) Continent, (*b*) Island, (*c*) Peninsula, (*d*) Isthmus, (*e*) Strait, (*d*) Cape.

2. Where is (*a*) the Isthmus of Suez, (*b*) the Isthmus of Panama?

3. Describe the position of the following Straits:—Behring Strait, Davis Strait, the Straits of Belle Isle, of Gibraltar, of Babelmandeb, and of Magellan.

4. Where is (*a*) Cape Horn, (*b*) the Cape of Good Hope, (*c*) the North Cape, (*d*) Cape Finisterre, (*e*) Cape Race?

5. What ranges of mountains lie (*a*) along the West of North America, (*b*) along the West of South America, (*c*) between France and Spain, (*d*) on the North of Italy, (*e*) between the Black Sea and the Caspian, (*f*) on the Eastern boundary of Europe, (*g*) on the North of India?

6. Name any ten countries in Europe, with their respective capitals.

7. Describe the position of the following places associated with the late war between Turkey and Russia:—the Balkans, the Bosphorus, the Sea of Marmora, the Dardanelles, Constantinople, Adrianople.

8. Describe the general course of the Rivers St. Lawrence, Ottawa, Saskatchewan, Red River, and Fraser River.

9. Name the capitals of the different Provinces in the Dominion of Canada.

GOSPELS.

MONDAY, MAY 20TH:—AFTERNOON, 4 TO 5.

Examiners,..... { J. CLARK MURRAY, LL.D
REV. ROBERT LAING, M.A.

1. Name the father and the mother of John the Baptist.

2. Name the Emperor of Rome and the King of Judea at the time of the birth of Christ.

3. Who was (*a*) the High Priest, (*b*) the Procurator of Judea, (*c*) the Tetrarch of Galilee, at the time of the Crucifixion?

4. (*a*) What cruelty did the King of Judea perpetrate on hearing of the birth of the Messiah? (*b*) How did Jesus escape?

5. Relate the incidents connected with the first visit which Jesus, as a boy, maee to the Passover.

6. What two miracles did Jesus perform at Cana of Galilee?

7. Besides the Twelve, what other body of disciples is mentioned in the Gospels?

8. Name the Province of Palestine in which each of the following place was situated:—Nazareth, Jericho, Jerusalem, Capernaum, Sychar.

GEOGRAPHY.

THURSDAY, MAY 30TH:—AFTERNOON 2 TO 5.

Examiners,..... { J. CLARK MURRAY, LL.D.
REV. ROBERT LAING, M.A.

1. On what circumstances are the chief qualities of climate (heat and moisture) mainly dependent?

2. How are tides caused? Account for spring and neap tides.

3. Describe the formation of dew, clouds, rain and snow.

4. Describe the physical features of the Province of Quebec.

5. Name the principal Mountain Ranges, Rivers, Lakes and Mineral products of the United States.

6. Give the names of the political divisions of South America with their capitals.

7. Sketch a map of Scotland, England and Wales, laying down the principal rivers and lakes.

8. Give the names and positions of the principal towns of Russia, and give some account of its political state.

9. Where, and under what government, are New Zealand, Sierra Leone, Cairo, Burmah, Mecca, Thibet, Pekin, Havana, Corsica, Burmah, Aden, Armenia?

10. What are the chief exports of the following countries:—France, British India, Japan, Norway and Sweden?

ENGLISH GRAMMAR [MORELL'S].

TUESDAY, MAY 21ss:—MORNING, 9 TO 12.

Examiners, ... { J. CLARK MURRAY, LL.D. / REV. ROBERT LAING, M.A.

1. Explain what is meant by a Vowel, a Consonant, and a Semi-vowel, giving an example of each.

2. When should Capital letters be employed?

3. In the following sentence distinguish the Proper, the Common, and the Abstract Nouns:—"At the battle of Poictiers, John exhibited more courage than ability, more of the soldier than the general."

4. Give the Plural of each of the following Nouns:—Boy, Lady, Box, Ox, Ship, Sheep, Pan, Man, Boot, Foot, House, Mouse, Hero, Bee, Stuff, Staff.

5. Give the Comparative and Superlative of Kind, Beautiful, Holy, Noble, Far, Fore, Many, Old.

6. Explain what is meant by Voice, Mood, Tense, Person and Number, in Verbs.

7. Distinguish (*a*) the Modern or Regular, and the Ancient or Irregular forms of the Verb; (*b*) the three classes of the latter.

8. Distinguish (*a*) Subject and Predicate, (*b*) Direct and Indirect Object, in a sentence.

9. Distinguish these in the following sentence:—"My brother gave me this beautiful flower."

10. Distinguish Simple, Complex and Compound sentences, giving an example of each.

11. Distinguish the three kinds of Subordinate Sentences.

12. Underline the Subordinate Sentences in the following verse:—

"Tell me not in mournful numbers,
'Life is but an empty dream!'
For the soul is dead that slumbers,
And things are not what they seem."

ENGLISH LANGUAGE (EARLE'S PHILOLOGY, AND TRENCH'S STUDY OF WORDS).

TUESDAY, MAY 28TH:—MORNING, 9 TO 12.

Examiners..... { J. CLARK MURRAY, LL.D.
REV. ROBERT LAING, M.A.

1. Explain and illustrate Grimm's Law of the Transition of Consonants between English, on the one hand, and the Classical languages (Greek and Latin), on the other.

2. Mention any traces, in English, of the Roman occupation of Britain.

3. (*a*) What parts of England were occupied by the Angles and the Saxons respectively? (*b*) What name did the Saxons give to their language? (*c*) Explain how our language should have been called English.

4. (*a*) Explain, by reference to the expression "King's English," the formation of a classical English, as distinguished from its provincial dialects. (*b*) What two poets first displayed this classical English? (*c*) Is their language more, or less, Frenchified than that of contemporary provincial writers?

5. (*a*) Distinguish Presentive and Symbolic words. (*b*) Illustrate this distinction by the double usage of *Will*, *Shall*, *Do*, *Now*.

6. Illustrate, by examples in English, the tendency of Symbolic words to adhere to Presentive, and thus to form inflections.

7. (*a*) Distinguish Strong and Weak Verbs. (*b*) Which have a tendency to pass into the other? (*c*) Mention any examples of an opposite tendency.

8. (*a*) What was the original meaning of the terminations—*ness*,—*dom*, —*hood* (or—*head*),—*ship*? (*b*) Explain the terminations in the substantives *Knowledge* and *Bishopric*.

9. (*a*) What was the ancient and native form of the feminine noun? (*b*) Mention any trace of it in modern English. (*c*) By what French substitute has it been supplanted? (*d*) Explain the form *Spinster*.

10. Distinguish the three classes of adverbs, giving an example of each.

11. In what sense does Trench hold that language was given by God to man?

12. Illustrate, after Trench, (*a*) the Poetry, (*b*) the Morality, (*c*) the History, in words.

BRITISH AND CANADIAN HISTORY.

WEDNESDAY, MAY 22ND:—AFTERNOON, 2 TO 5.

Examiners,..... ..... { J. CLARKE MURRAY, LL.D. / REV. ROBERT LAING, M.A.

1. What was the date of the landing of Julius Cæsar in Britain?

2. (*a*) Who were the two leaders of the Jutes who are said to have invaded Britain? (*b*) What is the traditional date of their invasion?

3. (*a*) What Saxon King of England is distinguished as "the Great"? (*b*) In what century did he reign?

4. (*a*) Who was the last of the Saxon Kings of England? (*b*) In what battle was he slain? (*c*) What was the date of the battle? (*d*) Who was his conqueror?

5. Describe the Feudal system.

6. (*a*) What was the origin of the name *Plantagenet?* (*b*) What was the origin of the Plantagenet Line? (*c*) Who was the first king of the line? (*d*) What was the date of his accession?

7. (*a*) Which of the Edwards was nicknamed Longshanks? (*b*) What country did he add to the English crown? (*c*) What other country did he try to subjugate?

8. (*a*) Who was the last of the Plantagenet kings? (*b*) In what battle was he killed? (*c*) What was the date of the battle? (*d*) What line succeeded the Plantagenet? (*e*) Who was the first king of the new line?

9. (*a*) Name the kings of the Stuart period. (*b*) What was the great struggle of that period? (*c*) What was the final issue of the struggle?

10. (*a*) Under whose reign did the American colonies revolt from England? (*b*) What was the cause of the revolt?

11. Relate the historical events by which Canada came into the possession of Great Britain.

12. (*a*) What was Canada named at the commencement of British rule? (*b*) Into what provinces was it afterwards divided? (*c*) When, and for what reason, were the divided provinces united? (*d*) When was the Dominion formed?

ARITHMETIC.

WEDNESDAY, MAY 22ND:—MORNING, 9 TO 12.

Examiners,..... { ARCHIBALD DUFF, M.A.
GEORGE H. CHANDLER, B.A.

1. Two men, A and B, run a race. A gives B a start of 17 yards but gains on him at the rate of 2 feet in 5 yards; how much will A be in advance of B when B has run one mile?

2. Multiply the difference between 43 *a.* 2 *r.* 7 per. and 19 *a.* 3 *r*, 27 per. 18 yds by 378.

3. Mention the different kinds of fractions, and give an example of each.

4. Divide 7147.12 by 1127 and $.6\dot{1}4$ by $2.7\dot{6}$.

5. What is the interest on $894.80 for 7 yrs. 3 mos. 20 days at 6 per cent. per annum?

6. Extract the square root of $428\frac{3}{7}$.

7. Using only the decimal point and the following digits, 735612901, and these always in the same order, (*a*) set down six different numbers; (*b*) express each number in words; (*c*) find their sum; (*d*) write down the sum in Roman notation; (*e*) multiply the sum by $\overline{\text{C}}\text{LDCXIV}$.

8. Simplify $\left\{ \frac{3}{4} + \frac{7}{6} \text{ of } 5\frac{1}{2} \right\} \times \left\{ \frac{5}{6} + \frac{2}{3} + 3\frac{3}{4} \right\} \div \left\{ \frac{47}{345} \text{ of } 9 \right\}$

9. The Duke of Wellington was born on May 1, 1769. Find on what day he was 12000 days old, explaining, as well as you can, why different years have different lengths.

10. Add together $\frac{3}{5}$ of 4 cwt., $\frac{2}{3}$ of a quarter, and $\frac{1}{8}$ of 21 lbs., and express the result as a decimal fraction of a ton.

11. A merchant buys 13600 bushels of wheat at $1.05 per bushel; $2\frac{1}{2}$ per cent. of it is wasted; he sells 56 per cent. of the remainder at $1.00 per bushel, 20 per cent. of what is now left at $1.05, and the rest at $1.25 per bushel. What does he gain or lose by the transaction?

12. What sum will produce for interest $87.75 in $2\frac{1}{4}$ years at $6\frac{1}{2}$ per cent. simple interest?

GREEK.

TUESDAY, MAY 23RD:—MORNING, 9 TO 12.

Examiners,..... { REV. GEORGE CORNISH, LL.D.
REV. GEORGE WEIR, M.A.

1. Translate Homer, Iliad, Bk. I. :—

(A) Τὸν δ' ἄρ' ὑποβλήδην ἠμείβετο δῖος Ἀχιλλεύς
„ ἦ γάρ κεν δειλός τε καὶ οὐτιδανὸς καλεοίμην,
εἰ δὴ σοὶ πᾶν ἔργον ὑπείξομαι, ὅττι κεν εἴπῃς·
ἄλλοισιν δὴ ταῦτ' ἐπιτέλλεο, μὴ γὰρ ἔμοιγε
σήμαιν'· οὐ γὰρ ἔγωγ' ἔτι σοι πείσεσθαι ὀΐω.
ἄλλο δέ τοι ἐρέω, σὺ δ' ἐνὶ φρεσὶ βάλλεο σῇσιν·
χερσὶ μὲν οὔτοι ἐγωγε μαχήσομαι εἵνεκα κούρης
οὔτε σοὶ οὔτε τῳ ἄλλῳ, ἐπεί μ' ἀφέλεσθέ γε δόντες·
τῶν δ' ἄλλων ἃ μοί ἐστι θοῇ παρὰ νηί μελαίνῃ,
τῶν οὐκ ἂν τι φέροις ἀνελὼν ἀέκοντος ἐμεῖο.
εἰ δ' ἄγε μὴν, πείρησαι, ἵνα γνώωσι καὶ οἵδε·
αἶψά τοι αἷμα κελαινὸν ἐρωήσει περὶ δουρί."

(B) Ἦμος δ' ἠέλιος κατέδυ καὶ ἐπὶ κνέφας ἦλθεν,
δὴ τότε κοιμήσαντο παρὰ πρυμνήσια νηός.
ἦμος δ' ἠριγένεια φάνη ῥοδοδάκτυλος Ἠώς,
καὶ τότ' ἔπειτ' ἀνάγοντο μετὰ στρατὸν εὐρὺν Ἀχαιῶν·
τοῖσιν δ' ἴκμενον οὖρον ἴει ἑκάεργος Ἀπόλλων.
οἱ δ' ἱστὸν στήσαντ' ἀνά θ' ἱστία λευκὰ πέτασσαν·
ἐν δ' ἄνεμος πρῆσεν μέσον ἱστίον, ἀμφὶ δὲ κῦμα
στείρῃ πορφύρεον μεγάλ' ἴαχε νηὸς ἰούσης·
ἡ δ' ἔθεεν κατὰ κῦμα διαπρήσσουσα κέλευθον.
αὐτὰρ ἐπεὶ ῥ' ἵκοντο κατὰ στρατὸν εὐρὺν Ἀχαιῶν,
νῆα μὲν οἵγε μέλαιναν ἐπ' ἠπείροιο ἔρυσσαν
ὑψοῦ ἐπὶ ψαμάθοις, ὑπὸ δ' ἔρματα μακρὰ τάνυσσαν·
αὐτοὶ δ' ἐσκίδναντο κατὰ κλισίας τε νέας τε.

2. Describe as accurately as you can, the terms *πρυμνήσια, ἱστόν, ἱστία, στείρη, ἔρματα μακρά*, and name the other principal parts of the Homeric ship.

3. Write down the Epic forms of *nouns, pronouns* and *verbs* that occur in exts. (A) and (B), and give their equivalents in the dialect of Xenophon.

4. Write down the scheme of the metre of the Homeric Poems. Scan (carefully marking the quantities of the several feet) the last four verses of ext. (A), and account for the quantity of the ultimate in the words *μοί*, *πείρησαι*, *τοι*, severally.

5. Parse:—*ὑποβλήδην* (with derivation and different meanings), *εἰπῆς*, *ἐπιτέλλεο*, *σήμαιν'*, *πείσεσθαι*, *φρεσί*, *χερσί*, *ἀφέλεσθε*, *πείρησαι*, *των*, *ἐσκίδναντο*.

6. Translate, Xenophon, Anabasis, Bk. I.:—

(C) Μένων δὲ πρὶν δῆλον εἶναι τί ποιήσουσιν οἱ ἄλλοι στρατιῶται, πότερον ἕψονται Κύρῳ ἢ οὔ, συνέλεξε τὸ αὑτοῦ στράτευμα χωρὶς τῶν ἄλλων καὶ ἔλεξε τάδε· Ἄνδρες, ἐάν μοι πείσθητε, οὔτε κινδυνεύσαντες οὔτε πονήσαντες τῶν ἄλλων πλέον προτιμήσεσθε στρατιωτῶν ὑπὸ Κύρου. τί οὖν κελεύω ποιῆσαι; νῦν δεῖται Κῦρος ἕπεσθαι τοὺς Ἕλληνας ἐπὶ βασιλέα· ἐγὼ οὖν φημι ὑμᾶς χρῆναι διαβῆναι τὸν Εὐφράτην ποταμὸν πρὶν δῆλον εἶναι ὅ,τι οἱ ἄλλοι Ἕλληνες ἀποκρινοῦνται Κύρῳ. Ἢν μὲν γὰρ ψηφίσωνται ἕπεσθαι, ὑμεῖς δόξετε αἴτιοι εἶναι ἀρξαντες τοῦ διαβαίνειν, καὶ ὡς προθυμοτάτοις οὖσιν ὑμῖν χάριν εἴσεται Κῦρος καὶ ἀποδώσει· ἐπίσταται δ' εἴ τις καὶ ἄλλος· ἢν δ' ἀποψηφίσωνται οἱ ἄλλοι, ἄπιμεν μὲν ἅπαντες εἰς τοὔμπαλιν, ὑμῖν δὲ ὡς μόνοις πειθομένοις πιστοτάτοις χρήσεται καὶ εἰς φρούρια καὶ εἰς λοχαγίας, καὶ ἄλλου οὑτινος ἂν δέησθε, οἶδα ὅτι ὡς φίλου τεύξεσθε Κύρου.

(D) Ὁ οὖν Κλέαρχος οὐκ ἀνεβίβαζεν ἐπὶ τὸν λόφον, ἀλλ' ὑπὸ αὐτὸν στήσας τὸ στράτευμα πέμπει Δύκιον τὸν Συρακόσιον καὶ ἄλλον ἐπὶ τὸν λόφον καὶ κελεύει κατιδόντας τὰ ὑπὲρ τοῦ λόφου τί ἐστιν ἀπαγγεῖλαι. Καὶ ὁ Λύκιος ἠλασέ τε καὶ ἰδὼν ἀπαγγέλλει, ὅτι φεύγουσιν ἀνὰ κράτος. σχεδὸν δ' ὅτε ταῦτα ἦν καὶ ἥλιος ἐδύετο. Ἐνταῦθα δ' ἔστησαν οἱ Ἕλληνες καὶ θέμενοι τὰ ὅπλα ἀνεπαύοντο· καὶ ἅμα μὲν ἐθαύμαζον, ὅτι οὐδαμοῦ Κῦρος φαίνοιτο οὐδ' ἄλλος ἀπ αὐτοῦ οὐδείς παρείη· οὐ γὰρ ᾔδεσαν αὐτὸν τεθνηκότα, ἀλλ' εἴκαζον ἢ διώκοντα οἴχεσθαι ἢ καταληψόμενόν τι προεληλακέναι. Καὶ αὐτοὶ ἐβουλεύοντο, εἰ αὐτοῦ μείναντες τὰ σκευοφόρα ἐνταῦθα ἀγοιντο ἢ ἀπίοιεν ἐπὶ τὸ στρατόπεδον. ἔδοξεν οὖν αὐτοῖς ἀπιέναι· καὶ ἀφικνοῦντας ἀμφὶ δόρπηστον ἐπὶ τὰς σκήνας.

7. Explain the construction of the following:—(*a*) *δῆλον εἶναι*. (*b*) *πείσθητε*. (*c*) *ἵησι τῇ ἀξίνῃ* (*αὐτόν*). How might this be otherwise expressed? (*d*) *οὗτος μὲν αὐτοῦ ἥμαρτεν*. (*e*) *ὑστέρησε τῆς μάχης ἡμέρας πέντε*. (*f*) *ἄρξαντες τοῦ διαβαίνειν*. (*g*) *οὐδὲν ἤχθετο αὐτῶν πολεμούντων*.

8. Give the meaning and derivation of:—*δαρεικούς*, *ξένος*, *σταθμούς ἡμιόλιον*, *δυσπόρευτος*, *πλῆθος*, *μεσημβρίαν*, *ἐγκρατεῖς*.

9. (*a*) Decline the following words:—*ἀνήρ, ῥήτωρ, λαγώς, χώρα.* (*b*) Write down the *Nom. Sing.* and *Dat. Plu.* of *γυναῖκα, κέρατα, χειμῶνος, ὄρνιν, μηνός, τείχη.* (*c*) Give the Comparative and Superlative of:—*πολύς, ταχύς, πιστός, σοφός, ἄνω, μάλα.* (*d*) Write down the *Aorist* and *Future* (1st Sing.), Indicative, of:—*ἀγγέλλω, πέμπω, πίπτω, ποιέω.*

10. (*a*) State and illustrate the rule for the *number* of the verb, when its nominative is a noun in the *neuter plural.* (*b*) What verbs in Greek take the dependent verb in the Participial instead of the Infinitive Mood? (*c*) Give the several meanings of *αὐτὸς* according to its position.

11. Translate into Greek:—(1) The king himself did this. (2) The next day the army came. (3) The horse runs very fast. (4) He took pleasure in doing good to his children. (5) He came to see his son.

LATIN.

SATURDAY, MAY 25TH;—MORNING, 9 TO 12.

Examiners,..... { REV. GEORGE CORNISH, LL.D.
REV. GEORGE WEIR, M.A.

1. Translate, Cæsar, De Bell. Gall., Bk. 1:

(A) Bello Helvetiorum confeotc totius fere Galliae legati, principes civitatum, ad Caesarum *gratulatum* convenerunt: *Intilligere sese*, tamesti proveteribus *Helvetiorum* injuriis *populi Romani* ab his poenas bello repetisset, tamen eam rem non minus ex usu terrae Galliae quam populi Romani accidisse, propterea quod eo consilio *florentissimis rebus* domos suas Helvetii reliquissent, uti *toti Galliae* bellum *inferrent imperioque* potirentur locumque domicilio ex magna copia deligerent, quem ex omni Gallia opportunissimum ac fructuosissimum judicassent, reliquasque civitates stipendiarias haberent. Petierunt, Uti sibi concilium totius Galliae in diem certam indicere idque Caesaris voluntate facere liceret; sese habere quasdam res quas ex communi consensu ab eo petere vellent. Ea re permissa diem *concilio* constituerunt, et jurejurando ne quis enuntıa et, nisi quibes communi consilia mandatum esset, inter se sanxerunt.

2. Explain carefully the construction of the words in Italics in the above ext.

3. Express in Latin the full forms for the numerals in the following ext. : —"Quarum omnium rerum summa erat capitum Helvetiorum milia CCLXIII, Tulingorum milia XXXVI, Latobrigorum XIV, Rauracorum XXIII Boiorum XXXII : ex his qui arma ferre possent ad milia XCII. Summa omnium fuerunt ad milia CCCXLVIII. Eorum qui domum redierunt censu habito, ut Cæsar imperaverat, repertus est numerus milium C et X."

4. Translate, Horace, Odes, Bk. 1. :—

(B) Me quoque, devexi rapidus comes Orionis
Illyricis Notus obruit undis.
At tu, nauta, vagaene parce malignus arenae
ossibus et capiti inhumato
particulam dare; sic quodcumque minabitur Eurus
fluctibus Hesperiis, Venusinae
plectantur silvae, to sospite : multaque merces,

unde potest, tibi defluat aequo
ab Iove Neptndoque sacri custode Tarenti.
Negligis immeritis nocituram
postmodo te natis fraudem committere? Fors et
debita iura vicesque superbae
te maneant ipsum : precibus non linquar inultis,
teque piacula nulla resolvent.
Quamquam festinas, non est more longa : licebit
iniecto ter pulvere curras.

(C) Parens deorum cultor et infrequens,
insanientis dum sapientiae
consultus erro, nuac retrorsum
vela dare atque iterare cursus

cogor relicsos : namque Diespiter,
igni corusco nubila dividens
plerumque, per purum tonantes
egit equos volucremque currum,

quo bruta tellus, et vaga flumina,
quo Styx et invisi horrida Taenari
sedes Atlanteusque finis
concutitur. Valet ima summis

mutare, et insignem attenuat deus,
obscura promens : hinc apicem rapax
Fortuna cum stridore acuto
sustulit, hic posuisse gaudet.

5. (*a*) Explain the custom referred to in vss. 3-5 of ext. (B). (*b*) Write short explanatory notes on the following references in the Ode from which the ext. is taken :—(1) Archyta. (2) Pelopis genitor. (3) Litus Matinum. (4) Panthoiden. (5) Clypeo refixo. (*c*) Derive and explain the terms *Diespiter* and *Atlanteus*.

6. Translate, Virgil, Æneid I. :—

(D) O Regina, novam cui condere Iuppiter urbem
Iustitiaque dedit gentis frenare superbas,
Troes te miseri, ventis maria omnia vecti,
Oramus, prohibe infandos a navibus ignis,
Parce pio generi, et propius res aspice nostras.
Non nos aut ferro Libycos populare Penatis
Venimus aut raptas ad litora vetere praedas;
Non ea vis animo, nec tanta superbia victis.
Est locus, Hesperiam Graii cognomine dicunt,
Terra antiqua, potens armis atque ubere glaebae;
Oenotri coluere viri; nunc fama, minores
Italiam dixisse ducis de nomine gentem.

7. Mention the kinds of verse used in ext. (B) and (C) and scan the first four lines of each.

8. (*a*) Explain the following from Virgil :—(1) *Dum conderet*;—why the subjunctive? (2) *Sed enim*;—give the Greek equivalent. (3) *Biremis*. (4) *Trinacrius*. (5) *Magalia*. (6) *Peplum*. (7) *Penates*. (8) *Amazonis*; (*b*) Parse, giving the principal parts of the verbs, and indicate the number, gender, case and declension of nouns and adjectives :—confecto, usu, inferrent, potirentur, insanientis, vela, relictos, coucutitor, ardentes jura, effodiuut, decora, suspicit.

9. (*a*) Decline (in combination) in both singular and plural :—*uterque consul*, *audax facinus*, *nix alba*, *altera domus*. (*b*) Write down the comparative and superlative of *pulcher*, *facilis*, *nequam*, *frugi*, *ultra*, *extra*. (*c*) Give the Perfect Ind. (1st sing.) Supine and Pres. Infinitive of *edo*, *lavo vendo*, *audeo*, *fingo*, *figo*. (*d*) Give the Future Infinitives, Active and Passive of *deligo*, *do*, *exerceo*.

10. Express in Latin :—1. Having crossed the river, he made for the city. 2. The general has need of the authority of the Senate. 3. Rome, which is the capital of Italy. 4. Many a battle did the soldiers fight. 5. He stood on the top of the mountain. 6. King Servius surrounded the city of Rome with a wall.

ENGLISH LANGUAGE (EARLE'S PHILOLOGY, AND TRENCH'S STUDY OF WORDS).

TUESDAY, MAY 28TH:—MORNING, 9 TO 12.

Examiners..... ..... { J. CLARK MURRAY, LL.D. / REV. ROBERT LAING, M.A.

1. Explain and illustrate Grimm's Law of the Transition of Consonants between English, on the one hand, and the Classical languages (Greek and Latin), on the other.

2. Mention any traces, in English, of the Roman occupation of Britain.

3. (*a*) What parts of England were occupied by the Angles and the Saxons respectively? (*b*) What name did the Saxons give to their language? (*c*) Explain how our language should have been called English.

4. (*a*) Explain, by reference to the expression "King's English," the formation of a classical English, as distinguished from its provincial dialects. (*b*) What two poets first displayed this classical English? (*c*) Is their language more, or less, Frenchified than that of contemporary provincial writers?

5. (*a*) Distinguish Presentive and Symbolic words. (*b*) Illustrate this distinction by the double usage of *Will*, *Shall*, *Do*, *Now*.

6. Illustrate, by examples in English, the tendency of Symbolic words to adhere to Presentive, and thus to form inflections.

7. (*a*) Distinguish Strong and Weak Verbs. (*b*) Which have a tendency to pass into the other? (*c*) Mention any examples of an opposite tendency.

8. (*a*) What was the original meaning of the terminations—*ness*,—*dom*, —*hood* (or—*head*),—*ship*? (*b*) Explain the terminations in the substantives *Knowledge* and *Bishopric*.

9. (*a*) What was the ancient and native form of the feminine noun? (*b*) Mention any trace of it in modern English. (*c*) By what French substitute has it been supplanted? (*d*) Explain the form *Spinster*.

10. Distinguish the three classes of adverbs, giving an example of each.

11. In what sense does Trench hold that language was given by God to man?

12. Illustrate, after Trench, (*a*) the Poetry, (*b*) the Morality, (*c*) the History, in words.

GENERAL EUROPEAN HISTORY.

TUESDAY, MAY 28TH :—AFTERNOON, 2 TO 5.

Examiners,..... { J. CLARK MURRAY, LL.D.
REV. ROBERT LAING, M. A.

1. Name the three great races into which the various nations of mankind are divided, and the leading nations of each race.

2. Sketch the rise and growth of Macedonia under Philip.

3. Give a short account of the conquest of Macedonia and Greece by the Romans.

4. Mention the Latin writers of the Augustan Age.

5. Relate briefly the history of Constantine, and his changes in the Governmentof the Empire.

6. Give the names and describe the origin of the Romance nations and languages.

7. Name the Swabin Emperors, and give an account of the reign of Frederick Barbarossa.

8. Give a brief account of the Thirty Years' War.

9. Sketch an outline of the history of France during the reign of Lewis the Fourteenth.

10. When did the following personages live, and for what is each famous —Alexander the Great, Julius Cæsar, Hannibal, Constantine, Charlemagne Mahomet the Second, Peter the Great, Frederick the Great?

ENGLISH LITERATURE.

THURSDAY, MAY 30TH :—MORNING, 9 TO 12.

Examiners,..... { J. CLARK MURRAY, LL.D.
REV. ROBERT LAING, M.A.

1. Name the principal writers from the Conquest to Chaucer. Give some account of the poetical literature of this period.

2. Give the names of the Scottish poets up to the time of Elizabeth, and mention the characteristic elements of their poetry.

3. Give an account of the rise of the Drama, and name the Dramatists of the time of Elizabeth with their principal works.

4. Describe the change of poetic style and subject which took place after the Restoration.

5. Give a short account of William Wordsworth, and state briefly his view of Nature and Man.

6. Where is the scene of the Lady of the Lake laid? Mention the principal characters of the poem, and describe any one of them.

7. Give the substance of Canto III. of the Lady of the Lake.

8. Write short notes on the following terms and passages:—"Coronach," "Coir-nan-Uriskin," "Beltane," "Benvoirlich," 'Maronnan's Cell," "Roderigh Vich Alpine dhu, ho! ieroe!" "The fatal Ben Shie's boding scream," "Benledi saw the Cross of Fire. It glanced like lightning up Strath-Ire."

9. Mention the leading characteristics of Addison's prose style.

10. Describe the character of any one of the following:—Sir Roger de Coverley; Will. Honeycomb; Will. Wimble.

GEOGRAPHY.

THURSDAY, MAY 30TH:—AFTERNOON 2 TO 5.

Examiners,..... { J. CLARK MURRAY, LL.D.
REV. ROBERT LAING, M.A.

1. On what circumstances are the chief qualities of climate (heat and moisture) mainly dependent?

2. How are tides caused? Account for spring and neap tides.

3. Describe the formation of dew, clouds, rain and snow.

4. Describe the physical features of the Province of Quebec.

5. Name the principal Mountain Ranges, Rivers, Lakes and Mineral products of the United States.

6. Give the names of the political divisions of South America with their capitals.

7. Sketch a map of Scotland, England and Wales, laying down the principal rivers and lakes.

8. Give the names and positions of the principal towns of Russia, and give some account of its political state.

9. Where, and under what government, are New Zealand, Sierra Leone, Cairo, Burmah, Mecca, Thibet, Pekin, Havana, Corsica, Burmah, Aden, Armenia?

10. What are the chief exports of the following countries:—France, British India, Japan, Norway and Sweden?

FRENCH.

WEDNESDAY, MAY 23RD:—AFTERNOON, 2 TO 5.

Examiner,.....P. J. DAREY, M.A., B.C.L.

1. *Le Commissaire.*—Laissez-moi, (*a*) faire ; je sais (*b*) mon métier, Dieu merci. Ce n'est pas d'aujourd'hui que je me mêle (*c*) de découvrir les vols ; et je voudrais (*d*) avoir autant de sacs de mille francs que j'ai fait pendre de personnes.

Harpagon.—Tous les magistrats sont intéressés à prendre cette affaire en main ; et, si l'on (*e*) ne me fait retrouver mon argent, je demanderai justice de la justice.

Le Commissaire.—Il faut faire toutes les poursuites requises. Vous dites qu'il y avait dans cette cassette.....

Harpagon.—Dix mille (*f*) écus bien comptés.

Le Commissaire.—Le vol est considérable.

Harpagon.—Il n'y a (*g*) point de supplice assez grand pour l'énormité de ce crime ; et s'il demeure impuni, les choses les plus sacrées ne sont plus en sûreté.

Le Commissaire.—En quelles espèces était cette somme ?

Harpagon.—En bons louis d'or et pistoles bien trébuchantes (*h*).

Le Commissaire.—Qui soupçonnez-vous de ce vol (*i*).

Harpagon.—Tout le monde ; et je veux qu'on arrête prisonniers la ville et les faubourgs.

Le Commissaire.—Il faut, si vous m'en (*l*) croyez, n'effaroucher personne, et tâcher (*j*) doucement d'attraper quelques preuves, afin de procéder après, par la rigueur, au recouvrement des deniers (*k*) qui vous ont été pris

MOLIERE, L'AVARE.

(*a*) Why is this pronoun after the verb? When would it be placed before the verb in this same tense and person? What would be its form?

(*b*) What other French verb is translated into English by the same word as *sais?* What is the difference in the meaning of those verbs? What is their etymology?

(*c*) What do you call such verbs as *je me mêle?* What do you remark about the compound tenses of those verbs?

(*d*) What is the infinitive of this verb? Write *Subjunctive Present* and *Imperfect* and the four forms of the *Preterite Definite.*

(*e*) What do you call *l'?* Why is it used?

(*f*) Should *mille* be written with an *s?* Give the rule. When is it written *mil?*

(*g*) What do you call this verb *il n'y a point?* Write the *Subjunctive Preterite*, and *Conditional Past.*

(*h*) What is the meaning *trébucher?* How do you explain the use of trébuchantes in this place?

(*i*) What other meaning has *vol?*

(*j*) What is the meaning of *tacher* and what of *tâcher?* Write two other words whose meanings are changed by the use of the accent.

(*k*) What is the proper meaning of deniers? In what sense is it used here?

3. Write in the plural the first paragraph of the above extract, *i.e.*, from *laissez* to *personnes*.

4. Write correctly the past participles in the following sentences, and give the reasons why they are to be so written :

Nous avions *vu* semer ces blés, nous les aivons *vu* croître, et nous les avons *vu* détruire en un moment par la grêle qui est tombée. Ils se sont *vu* et ils se sont *parlé*. Translate those sentences.

5. Where do you place the subject of the verb in interrogative sentences ? 1st. When the subject is a noun. 2nd. When it is a pronoun. Give an example of each case.

6. Translate into French: *He wants a book*. Explain the two different constructions which may be used in the translations of the verb *wants* into French.

7. What kind of verbs which take the auxiliary "to have" in their compound tenses in English take "to be" in French? Give examples.

8. When do you translate the English *Pluperfect* by the French *Plus que parfait*, or by the *Passé antérieur?* Illustrate your answer by examples.

9. Explain the difference between *tout à coup* and *tout d'un coup ; de suite*, *tout de suite ; de bonne heure* and *à la bonne heure*.

10. Translate into French :—

The little Republic to which I gave laws was regulated in the following manner: By sunrise we all assembled in the common apartment, the fire being previously lighted by the servant. After we had saluted each other with proper ceremony, for I always thought fit to keep up some mechanical forms of good breeding, without which freedom ever destroys friendship, we all bent in gratitude to that Being who gave us another day. This duty being performed, my son and I went to pursue our usual industry abroad, while my wife and my daughters employed themselves in providing breakfast, which was always ready at a certain time. I allowed half an hour for this meal and an hour for dinner, which time was taken up in innocent mirth between my wife and daughters, and in philosophical arguments between my son and me.—GOLDSMITH, *The Vicar of Wakefield*.

GERMAN.

MONDAY, MAY 27TH:—AFTERNOON, 2 TO 5.

Examiner.....C. F. A. MARKGRAF, M.A

1. Translate into English:—

(A) Eines Morgens, als er von Neuem seines Bildes sich freuen wollte, fand er, daß sein Meister das ganze Gemälde ausgelöscht hatte. Zürnend und weinend rannte er zu ihm und fragte nach der Ursache des grausamen Verfahrens.

Der Meister antwortete: „Ich habe es mit weisem Bedacht gethan. Das Gemälde war gut; aber es war zugleich dein Verderben."

„Wie so?" fragte der junge Künstler.

„Lieber," antwortete der Meister, „du liebtest nicht mehr die Kunst in deinem Bilde, sondern nur dich selbst. Glaube mir, es war nicht vollendet, wenn es auch uns so schien; es war nur eine Studie.—Da, nimm den Pinsel und siehe, was du von Neuem erschaffest! Laß dich das Opfer nicht gereuen. Das Große muß in dir sein, ehe du es auf die Leinwand zu bringen vermagst."

Muthig und voll Zutrauen zu sich und seinem Lehrer ergriff er den Pinsel und vollendete sein herrlichstes Werk: das Opfer der Iphigenie Denn der Name des Künstlers war Timanthes.

Fragment from „Der Maler und sein Meister," by Krummacher.

(B) Kennst du das Land, wo die Citronen blühn,
Im dunkeln Laub die Goldorangen glühn,
Ein sanfter Wind vom blauen Himmel weht,
Die Myrthe still und hoch der Lorbeer steht?
Kennst du es wohl?
Dahin! Dahin!
Möcht' ich mir dir, o mein Geliebter, ziehn.

Kennst du das Haus? Auf Säulen ruht sein Dach
Es glänzt der Saal, es schimmert das Gemach,
Und Marmorbilder stehn und sehn mich an;
Was hat man dir, du armes Kind, gethan?
Kennst du es wohl?
Dahin Dahin!
Möcht' ich mit dir, o mein Beschützer, ziehn.

Kennst du den Berg, und seinen Wolkensteg?
Das Maulthier sucht im Nebel seinen Weg;
In Höhlen wohnt der Drachen alte Brut;
Es stürzt der Fels und über ihn die Fluth.
Dahin! Dahin!
Geht unser Weg! o Vater, laß uns ziehn. Goethe.

2. (*a*) What classes of Nouns are *always* masculine, or feminine, or neuter? (*b*) Which Plural terminations of Nouns are *always* accompanied by the modification of the radical vowel, and which are *never* so? (*c*) Do any Nouns remain unchanged in the Plural?

3. Decline in the Sing. and Plural:—The good son; this bright (hell) colour (Farbe); a great country (plur. great countries); fine, black cloth.

4. Give the gender and the Nominative and Genitive Singular of Kaufleute, Früchte, Wälder, Thore, Töchter, Augen, Ströme, Knaben, Wochentage, Thüren, Blätter, Frauen.

5. Give the meaning and derivation of Blümchen, Röcklein, nächſt, hölzern, höher, Bäuerinn, meiſt, eiſern, Körbchen, Gärtchen, Fräulein, kürzeſt, ſchärfer, gläſern.

6. (*a*) Translate:—We have no *time* to stay. I have seen him three *times* to-day. Have you been there a second *time?* (*b*) Write in full letters 101, 584, 7693.

7. (*a*) When are *this* and *that* expressed by „dies" and „das"? (*b*) How are *this one* and *that one* expressed in German?

8. Conjugate, giving the 1st and 3rd Sing., and the 2nd Plural of all Tenses of the Indicative:—wiſſen, erzählen, mitgehen.

9. Parse the following forms of verbs, and give the Present Infinitive of each:—geritten, verſprachen, kannſt, trägt, durfteſt, gewollt, brachtet mußte, ſieht, geworden, mochten, wiedergefunden, zog an, zerriſſen, ſtanden.

10. What is meant by *principal* and *dependent* sentences? Explain.

11. Translate into English:—

Die Sitten einiger wilden Völker ſind ſehr barbariſch. Die Bäume ſind im Frühlinge am ſchönſten. Kaiſer Karl der Fünfte und König Friedrich der Zweite waren große Fürſten. Wir fanden unſere Freunde nicht zu Hauſe, als wir ſie geſtern beſuchen wollten. Glänzende Feſte nehmen zuweilen ein trauriges Ende. Die Leute, denen du geſtern ſchriebſt, ſind ſchon vorige Woche abgereiſ't. Ich wohne ſeit vielen Jahren bei meinem Onkel. Man nannte mir die Namen aller Perſonen in der Geſellſchaft, aber ich kannte nicht eine von ihnen. Wir leſen gern nützliche Bücher. Jedermann gab etwas dem armen Manne, von deſſen Unglück Alle gehört hatten. Der Diener, welchen Sie vor einer Stunde nach der Stadt geſchickt haben, um die gekauften Bücher zu holen, iſt ſo eben zurückgekommen.

GEOMETRY.

MONDAY, MAY 27TH:—MORNING, 9 TO 12.

Examiners..... { ARCHIBALD DUFF, M.A
GEORGE H. CHANDLER, B.A.

1. The angles which one straight line makes with another straight line on one side of it are together equal to two right angles.

2. The three angles of any triangle are together equal to two right angles.

(*a*) Trisect a right angle.

3. The area of a triangle is one half that of a rectangle having the same base and height.

4. If a straight line be divided into any two parts, the square on the whole line is equal to sum of the squares on the two parts, together with twice the rectangle contained by the two parts.

5. From a given point draw a straight line which shall touch a given circle.

6. The angle in a semicircle is a right angle.

(*a*) Describe a circle which shall pass through a given point and touch a given straight line at a given point.

7. Any two sides of a triangle are together greater than the third side.

8. If the square described on one of the sides of a triangle be equal to the sum of the squares described on the other two sides of it, the angle contained by these two sides is a right angle.

9. In obtuse-angled triangles, if a perpendicular be drawn from either of the acute angles to the opposite side produced, the square on the side subtending the obtuse angle is greater than the sum of the squares on the sides containing the obtuse angle, by twice the rectangle contained by the side on which, when produced, the perpendicular falls, and the straight line intercepted without the triangle, between the foot of the perpendicular and the obtuse angle.

(*a*) In any triangle the sum of the squares on the sides is equal to twice the square on half the base together with twice the square on the straight line drawn from the vertex to the middle point of the base.

10. If a straight line drawn through the centre of a circle bisect a chord in it which does not pass through the centre, the former line shall cut the latter at right angles.

11. The angles in the same segment of a circle are equal to one another.

12. Bisect a given rectilineal angle.

ALGEBRA.

WEDNESDAY, MAY 29TH:—MORNING, 9 TO 12.

Examiners,..... { ARCHIBALD DUFF, M.A.
GEORGE H. CHANDLER, B.A.

1. When $a = 3$, $b = 4$, and $c = 1$, find the value of

$$3a + b - 5c;\ 6^a + 5\,b^{\frac{1}{2}} \div 2c;\ a\left(\sqrt{bc} + \sqrt{\frac{b}{c}}\right)$$

2. Show that $\{7a - (b + 2c)\} - \{a - (b - 4c)\} = 6\,(a - c)$.

3. Divide $x^6 - 2a^3\,x^3 + a^6$ by $x^2 - 2ax + a^2$, and $ax^3 - (a^2 + b^2)\,x^2 + b^2$ by $ax - b$.

4. What is the greatest common measure of $x^2 - 2x - 3$, $x^2 - 7x + 12$ and $x^2 - x - 6$.

5. Solve the following equations:

$$\frac{7x}{5} - 3 = \tfrac{2}{3}\,(1 + x),$$

$$\frac{ax}{b} + \frac{bx}{a} = a^2 + b^2,$$

$$\frac{2}{3x} + \frac{3}{2x} = 9.$$

6. Find the time between 12 and 1 o'clock when the hour and minute hands of a clock point in exactly opposite directions.

7. Prove that the product of the sum and difference of two quantities is equal to the difference of their squares.

8. Resolve each of the following into a pair of binomial factors:
$a^2 + 4ab + 4b^2$, $9a^2 - 24ab + 16b^2$, $a^4 - b^4$, $a^6 - b^6$, $n^2 + 2n + 1$.

9. Find the sum of $2a$, $3a + \dfrac{2x}{5}$, and $a + \dfrac{8x}{9}$;

of $a + x$, $\dfrac{a}{a - x}$, $\dfrac{a - x}{a}$

and divide $x^2 + \dfrac{x^3}{a - b}$ by $\dfrac{ab}{a - b} - y$.

10. Find the values of the unknown quantities in the following sets of simultaneous equations:—

$$\left\{\begin{array}{l} \dfrac{\quad}{3} + 8y = 31, \\ \dfrac{y + 5}{4} + 10x = 192. \end{array}\right\};\qquad \left\{\begin{array}{l} x + \frac{1}{2}\,y + \frac{1}{3}\,z = 32 \\ \frac{1}{3}\,x + \frac{1}{4}\,y + \frac{1}{5}\,z = 15 \\ \frac{1}{4}\,x + \frac{1}{5}\,y + \frac{1}{6}\,z = 12 \end{array}\right\}.$$

11. Find the cube of $-\frac{2}{3}x^2y^3$, the fourth power of $\frac{3a^2x}{5b^2}$, the fifth power of $a - y$, and the cube of $a - bx + c$.

12. Find the cube root of $\frac{8a^3}{125x^6}$, the fourth root of $256a^4x^8$, and square root of $4x^6 - 4x^4 + 12x^3 + x^2 - 6x + 9$.

NATURAL PHILOSOPHY,—MECHANICS AND HYDROSTATICS.

WEDNESDAY, MAY 29TH:—AFTERNOON, 2 TO 5.

Examiners..... { ARCHIBALD DUFF, M.A.
GEORGE H. CHANDLER, B.A.

1. Expalin what is ment by the *parallelogram of forces* and the *polygon of forces.*

2. A rod, whose weight may be neglected, rests on two points 12 inches apart; a weight of 10 lbs. hangs on the rod between the points, and 4 inches from one of them. Find the pressure on each point.

3. What is the third law of motion? Mention some illustrations of it, suggested by the objects in the room.

4. A body is projected vertically upwards with a velocity of 100 feet per second: find its height after 3 seconds.

(*a.*) After what interval is it 140 feet above the point of projection?

5. Describe the common Barometer. Explain its use in finding the height of a mountain.

6. If each side of a cubical box filled with water be 100 square feet, calculate the pressure on the bottom and on each of the sides.

7. State the principles of the different kinds of levers; and explain with a diagram the common hay-scales.

8. What power will be necessary to sustain a weight of $3\frac{1}{2}$ tons by a system of ten moveable pulleys (arranged like Smeaton's) where the same string goes round all the pulleys.

9. State as fully as you can the laws of friction, describing some methods of investigating them.

10. If the length of a sling be two feet, how many revolutions per second must it make in order that a stone may be retained in it.

11. An iceberg (sp. gr. 0.92) is nearly a rectangular parallelepiped, and is 60 fathoms high, 50 fathoms wide, and 40 thick. Calculate its weight in tons, and show what volume of water it will displace.

12. The specific gravity of a nugget whose weight is 11½ ounces is 7.43; how much fine gold (sp. gr 19.31) does it contain, the sp. gr. of the quartz being 2.62?

ELEMENTARY CHEMISTRY.

SATURDAY, MAY 25:—MORNING, 9 TO 12.

Examiner,.....B. J. HARRINGTON, B.A., Ph.D.

1. Distinguish between chemical elements and chemical compounds, and between the latter and mechanical mixtures.

2. State the law of gaseous diffusion, and describe an experiment illustrating it.

3. Give the characters of the Regular, Rhombohedral, and Oblique systems of Crystallisation.

4. How is Carbonic Anhydride prepared, and what are its properties?

5. What do you understand by the terms *standard temperature* and *standard pressure*, as used in connection with the measurement of gases.

a. A litre of Oxygen is measured off at 15° C, what will its volume become if the temperature is raised to 20° C, supposing the pressure to remain constant?

6. What are the properties of the metal Sodium, and what the composition of its more important salts?

7. What substances are indicated by the following formulæ: Fe_2O_3, $PbCO_3$, MnO_2, H_3PO_4, $AgNO_3$, $BaSO_4$.

8. What are the processes and chemical changes indicated by the following equations?

$$2\,KClO_3 = 2\,KCl + 3\,O_2$$
$$Zn + H_2SO_4 = ZnSO_4 + H_2.$$

9. Give the symbols and atomic weights of Copper, Silver, Zinc and Antimony. By what tests may these metals be distinguished when in solution?

10. Distinguish between efflorescent and deliquescent salts, and give examples of allotropy.

BOTANY.

MONDAY, MAY 27TH:—AFTERNCON, 2 TO 5.

Examiner,..... .....PRINCIPAL DAWSON

1. Define Botany, and explain its principal subdivisions.

2. Describe the parts of a Dicotyledonous Embryo.

3. Explain the nature of Axillary and Terminal Buds, and of the Rhizoma and Corm.

4. State the parts of a normal leaf, and describe some of their modifications for special uses.

5. Name the leading kinds of Inflorescence, and describe one of them, with illustrations of its more important varieties.

6. Describe in detail the parts of the Stamen and Pistil.

7. What are the structures in a normal Fruit? Mention some important modifications.

8. Explain the different kinds of food required by plants and their sources.

9. State the forms, origin and uses of Woody Fibres, and Ducts or Vessels.

10. Characterize the different Classes of Plants, with examples.

11. Describe the parts of the flower exhibited.

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